CHAPTER 5
Consultation, Coordination and Public Involvement

5.1 Interrelationships

BLM's authority for the proposed action includes Federal Land Policy and Management Act (FLPMA) of 1976 [43 United States Code (U.S.C.) 1701 et seq.], Section 211 of the Energy Policy Act (EPAct) of 2005 (119 Stat. 594, 600), and BLM's Solar Energy Development Policy of April 4, 2007. The FLPMA authorizes BLM to issue right-of-way (ROW) grants for renewable energy projects. Section 211 of the Energy Policy Act of 2005 states that the Secretary of the Interior should seek to have approved a minimum of 10,000 megawatts of renewable energy generating capacity on public lands by 2015.

The BLM coordinates its fire management activities with the actions of related federal and state agencies responsible for fire management. The Federal Wildland Fire Policy is a collaborative effort that includes the BLM, USFS, National Park Service (NPS), USFWS, Bureau of Indian Affairs, the National Biological Service, and state wildlife management organizations. The collaborative effort has formulated and standardized the guiding principals and priorities of wildland fire management. The National Fire Plan is a collaborative interagency effort to apply the Federal Wildland Policy to all Federal Land Management Agencies and partners in state forestry or lands departments. Operational collaboration between the BLM, USFS, NPS, and USFWS is included in the Interagency Standards for Fire and Fire Aviation Operations 2003. This federally-approved document addresses fire management, wildfire suppression, fuels management and prescribed fire safety, interagency coordination and cooperation, qualifications and training, objectives, performance standards, and fire management program administration.

5.1.1 Department of Defense

BLM coordinates with Department of Defense prior to approval of ROWs for renewable energy, utility, and communication facilities to ensure that these facilities would not interfere with military training routes.

5.1.2 U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (USACE) has jurisdiction to protect the aquatic ecosystem, including water quality and wetland resources under Section 404 of the Clean Water Act. Under that authority, USACE regulates the discharge of dredged or fill material into waters of the

United States, including wetlands, by reviewing proposed projects to determine whether they may impact such resources and, thereby, are subject to Section 404's permit requirement. Throughout the PA/DEIS process, the BLM has provided information to the USACE to assist the agency in making a determination regarding its jurisdiction and need for a Section 404 permit.

5.1.3 California Energy Commission

The Energy Commission has the exclusive authority to certify the construction, modification, and operation of thermal electric power plants 50 MW or larger. The Energy Commission certification is in lieu of any permit required by state, regional, or local agencies and by federal agencies to the extent permitted by federal law (Pub. Res. Code Section 25500). The Energy Commission must review power plant AFCs to assess potential environmental impacts including potential impacts to public health and safety, potential measures to mitigate those impacts (Pub. Res. Code Section 25519), and compliance with applicable governmental laws or standards (Pub. Res. Section 25523 (d)). The Energy Commission staff's analyses were prepared in accordance with Public Resources Code, sections 25500 et seq.; Title 20, California Code of Regulations, sections 1701 et seq.; and CEQA (Pub. Res. Code Section 21000 et seq.; 14 Cal. Code Regs. § 15000 et seq.).

5.1.4 California Department of Fish and Game

The California Department of Fish and Game (CDFG) protects fish and aquatic habitats within the State through regulation of modifications to streambeds, under Section 1602 of the Fish and Game Code. The BLM and the Applicant have provided information to CDFG to assist the agency in its determination of the impacts to streambeds, and identification of permit and mitigation requirements. The Applicant filed a Streambed Alteration Agreement with CDFG. The requirements of the Streambed Alteration Agreement will be included as a recommended Condition of Certification/Mitigation Measure.

CDFG also has the authority to regulate potential impacts to species that are protected under the California Endangered Species Act (CESA) (Fish and Game Code Section 2050, et seq.). Accordingly, the Applicant has filed the appropriate incidental take permit applications. The requirements of the Incidental Take Permits will be included as a recommended Condition of Certification/Mitigation Measure discussed in the Biological Resources section of this document.

5.1.5 Mojave Desert Air Pollution Management District

The GSEP site is located in the Mojave Desert Air Basin[1] and is under the jurisdiction of the Mojave Desert Air Pollution Management District (District). Based upon the authorities in 40 Code of Federal Regulations (CFR) Part 52 and 40 CFR Part 60, the District is responsible for

[1] The Mojave Desert Air Basin lies inland southeast of the San Joaquin Valley Air Basin, and northeast of the South Coast Air Basin. The desert portions of Kern, San Bernardino, Riverside, and Los Angeles counties are within its boundaries.

issuing the federal New Source Review (NSR) permit and has been delegated enforcement of the applicable New Source Performance Standard (Subpart IIII).

5.1.6 California Department of Transportation

The California Department of Transportation (Caltrans) has jurisdiction over encroachments to Caltrans facilities and related easements and rights-of way.

5.1.7 Riverside County

The County of Riverside has jurisdiction to issue building permits to the GSEP. Building permits issued by the County are ministerial. The County also has jurisdiction to issue discretionary approvals for any easements, rights-of-way and or encroachment permits where County facilities are concerned.

5.2 Describe Consultation Processes for ESA Section 7, NHPA Section 106, and Indian Tribes

5.2.1 U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over threatened and endangered species listed under the Endangered Species Act (ESA) (16 U.S.C. Section 1531 et seq.). Formal consultation with the USFWS under Section 7 of the ESA is required for any federal action that may adversely affect a federally-listed species. This consultation will be initiated through the preparation and submittal of a Biological Assessment (BA), which would describe the proposed action to the USFWS. Following review of the BA, the USFWS would be expected to issue a Biological Opinion (BO) that specifies mitigation measures, which must be implemented for any protected species.

5.2.2 Section 106 Compliance

Adverse effects that the proposed or alternative actions may have on cultural resources will be resolved through compliance with the terms of a Programmatic Agreement (PA) under Section 106 of the National Historic Preservation Act (NHPA) (16 USC Section 470). Analysis of impacts in this document and implementation of the terms of the PA would evidence BLM's compliance with NHPA Section 106 and NEPA.

In accordance with 36 CFR Section 800.14(b), PAs are used for the resolution of adverse effects for complex project situations and when effects on historic properties, resources eligible for or listed in the National Register of Historic Places (NRHP), cannot be fully determined prior to approval of an undertaking. The BLM would prepare a PA in consultation with the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, Indian tribes, and other interested parties. The PA would govern the conclusion of the identification and

evaluation of historic properties (eligible for the NRHP), as well as the resolution of any adverse effects that may result from the proposed or alternative actions.

Treatment plans regarding historic properties that cannot be avoided by project construction will be developed in consultation with stakeholders as stipulated in the PA. When the PA is executed and fully implemented, the proposed action would have fulfilled the requirements of NEPA and Section 106 of the NHPA. The PA would be executed prior to BLM's approval of the Record of Decision for the ROW grant for the action.

5.2.3 Tribal Consultation for the GSEP

The BLM consults with Indian tribes on a government-to-government level in accordance with several authorities including NEPA, the NHPA, the American Indian Religious Freedom Act, and Executive Order 13007. Under Section 106 of the NHPA, the BLM consults with Indian tribes as part of its responsibilities to identify, evaluate, and resolve adverse effects on cultural resources affected by BLM undertakings.

The BLM invited Indian tribes to consult on the GSEP on a government-to-government basis at the earliest stages of project planning by letter in November 2009, and has followed up with an additional correspondence, communication, and other information since then. To date, 15 tribes or related entities have been identified and invited to consult on the proposed action, including those listed below. Tribes were also invited to a general information meeting and site visit, held on January 25, 2009. Letters to request consultation to develop a Section 106 Programmatic Agreement with tribes, the State Historic Preservation Officer, and the Advisory Council on Historic Preservation were mailed out to the below-listed tribes on February 25, 2010.

1. Ramona Band of Cahuilla Mission Indians
2. Torres-Martinez Desert Cahuilla Indians
3. Augustine Band of Cahuilla Mission Indians
4. Agua Caliente Band of Cahuilla Indians
5. Morongo Band of Cahuilla Mission Indians
6. Cabazon Band of Mission Indians
7. Twentynine Palms Band of Mission Indians
8. Quechan Tribe
9. Colorado River Indian Tribes
10. Chemehuevi Tribe
11. San Manuel Band of Serrano Mission Indians
12. Fort Mojave Indian Tribe
13. Cocopah Tribe

5.3 Implementation, Monitoring and Enforcement

5.3.1 Implementation

BLM will continue to involve and collaborate with the public during implementation of this proposed action. Opportunities to become involved during implementation and monitoring could include development of partnerships and community-based citizen working groups. BLM invites

citizens and user groups within the vicinity of the proposed action to become actively involved in implementation, monitoring, and enforcement of decisions. BLM and citizens could collaboratively develop site-specific goals and objectives that mutually benefit public land resources, local communities, and the people who live, work, or play on the public lands.

5.3.2 Monitoring

BLM would monitor activities throughout the life of the proposed action to ensure that decisions are implemented in accordance with the approved ROD and ROW grant. Monitoring would be conducted to determine whether decisions, BMPs and approved mitigation are achieving the desired effects. Effectiveness monitoring would provide an empirical data base on impacts of decisions and effectiveness of mitigation. Effectiveness monitoring also would be useful for improving analytical procedures for future impact analyses and for designing or improving mitigation and enhancement measures.

5.3.3 Scoping

The Notice of Intent was published in the *Federal Register (Volume 74, No. 224)* on November 23, 2009. On December 11, 2009, BLM held its primary Scoping Meeting at the University of California-Riverside, Palm Desert Campus. A draft scoping report was released for public review and comment in January 2010. The Final Scoping Report is included as Appendix C.

5.4 Public Comment Process

5.4.1 Introduction

The California Energy Commission (CEC) and the United States Bureau of Land Management (BLM) distributed the joint Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) for the Genesis Solar Energy Project (GSEP) for public and agency review and comment on April 9, 2010. The comment period ended July 8, 2010. Fourteen comment letters were received.

This Section 5 is organized as follows:

5.4.2 Format of the Responses to Comments: This section describes the format and organization of the comments received on the SA/DEIS and the responses to those comments.

5.4.3 Index of Comments Received: This section provides a list of the comments received on the SA/DEIS, by member of the public, agency, or organization, and lists the unique letter/number code for each comment.

5.4.4 Responses to the Comments: This section lists the individual comment numbers for each comment and provides a response for each comment.

5.4.5 Comments: This section contains all the comments received on the SA/DEIS, with the individual numeric code assigned to each individual comment within each comment letter/email.

5.4.2 Format of the Responses to Comments

The comments received on the SA/DEIS are organized by agency, organization, or member of the general public. Each comment letter/e-mail is assigned a unique number. Individual comments/issues within each comment letter/email are numbered individually along the right-hand margins. Comments, so delineated, are provided in Appendix H.

5.4.3 Index of Comments Received

Table 5-1 lists all individuals, agencies and organizations that provided written comments on the SA/DEIS during and after the comment period. As described above, each comment letter, upon receipt, was assigned a unique number with each comment individually numbered as well. For example, comment 1-01 is the first substantive comment in Comment Letter 1. The "1" represents the commenter; the "01" refers to the first comment in that letter.

TABLE 5-1
COMMENT LETTERS ON THE GENESIS SOLAR ENERGY PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Comment Letter	Commenter	Letter Available in Appendix H, Page
1	California Unions for Reliable Energy (CURE)	H-3
2	Metropolitan Water District of Southern California	H-35
3	NextEra Energy Resources, LLC; SolarReserve, LLC	H-41
4	Kaiser Eagle Mountain, LLC; Mine Reclamation, LLC (collectively, Kaiser)	H-44
5	Colorado River Board of California	H-46
6	CURE	H-50
7	Center for Biological Diversity	H-266
8	California/Nevada Regional Conservation Desert Committee of the Sierra Club (Sierra Club)	H-357
9	Western Watersheds Project	H-382
10	National Parks Service – Joshua Tree National Park	H-388
11	Brendan Hughes, Individual	H-397
12	US EPA Region IX	H-398
13	Tom Budlong, Individual	H-419
14	Galati Blek, LLP, for Genesis Solar	H-474

5.4.3.1 Letter 1 – Responses to Comments from CURE

1-001 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

1-002 The Applicant's construction and operation of the GSEP is subject to a myriad of separate and independent legal requirements, including NEPA, FLPMA, CEQA and the Warren-Alquist Act, which created and gives statutory authority to the California Energy Commission. The alleged noncompliance with CEQA and the Warren-Alquist Act is inapposite to the BLM's consideration of the proposed action under NEPA and FLPMA

1-003 See response to Comment 1-002.

1-004 See Response to Comment 1-002.

1-005 See Response to Comment 1-002.

1-006 See Response to Comment 1-002.

1-007 See Response to Comment 1-002.

1-008 See Response to Comment 1-002.

1-009 See Response to Comment 1-002.

1-010 See Response to Comment 1-002.

1-011 See Response to Comment 1-002.

1-012 See Response to Comment 1-002.

1-013 See Response to Comment 1-002.

1-014 See Response to Comment 1-002.

1-015 See Response to Comment 1-002.

1-016 See Response to Comment 1-002.

1-017 As noted in Response to Comment 1-002, the Applicant's construction and operation of the GSEP is subject to myriad separate and independent legal requirements, including requirements of the Regional Water Quality Control Board and the County of Riverside. Energy Commission approval of related documents does not govern the BLM's consideration of the proposed action under NEPA and FLPMA.

1-018 See Response to Comment 1-002.

1-019 See Response to Comment 1-002.

1-020 See Response to Comment 1-002.

1-021 See Response to Comment 1-002.

1-022 See Response to Comment 1-002.

1-023 See Response to Comment 1-002.

1-024 See Response to Comment 1-002.

1-025 See Response to Comment 1-002.

1-026 See Response to Comment 1-002.

1-027 See Response to Comment 1-002.

1-028 See Response to Comment 1-002.

1-029 See Response to Comment 1-002.

1-030 See Response to Comment 1-002.

1-031 See Response to Comment 1-002.

1-032 See Response to Comment 1-002.

1-033 See Response to Comment 1-002.

1-034 See Response to Comment 1-002.

1-035 See Response to Comment 1-002.

1-036 See Response to Comment 1-002.

1-037 See Response to Comment 1-002.

1-038 See Response to Comment 1-002.

1-039 See Response to Comment 1-002.

1-040 See Response to Comment 1-002.

1-041 See Response to Comment 1-002.

1-042 See Response to Comment 1-002.

1-043 See Response to Comment 1-002.

1-044 See Response to Comment 1-002.

1-045 See Response to Comment 1-002.

1-046 See Response to Comment 1-002.

1-047 See Response to Comment 1-002.

1-048 See Response to Comment 1-002.

1-049 See Response to Comment 1-002.

1-050 See Response to Comment 1-002.

1-051 See Response to Comment 1-002.

1-052 See Response to Comment 1-002.

1-053 See Response to Comment 1-002.

1-054 See Response to Comment 1-002.

1-055 See Response to Comment 1-002.

1-056 See Response to Comment 1-002.

1-057 See Response to Comment 1-002.

1-058 See Response to Comment 1-002.

1-059 See Response to Comment 1-002.

1-060 See Response to Comment 1-002.

1-061 See Response to Comment 1-002.

1-062 See Response to Comment 1-002.

1-063 See Response to Comment 1-002.

1-064 See Response to Comment 1-002.

1-065 See Response to Comment 1-002.

1-066 See Response to Comment 1-002.

1-067 See Response to Comment 1-002.

1-068 See Response to Comment 1-002.

1-069 See Response to Comment 1-002.

1-070 See Response to Comment 1-002.

1-071 See Response to Comment 1-002.

1-072 See Response to Comment 1-002.

1-073 See Response to Comment 1-002.

1-074 See Response to Comment 1-002.

1-075 See Response to Comment 1-002.

1-076 See Response to Comment 1-002.

1-077 See Response to Comment 1-002.

1-078 See Response to Comment 1-002.

1-079 See Response to Comment 1-002.

1-080 See Response to Comment 1-002.

1-081 See Response to Comment 1-002.

1-082 See Response to Comment 1-002.

1-083 See Response to Comment 1-002.

1-084 See Response to Comment 1-002.

1-085 See Response to Comment 1-002.

1-086 See Response to Comment 1-002.

1-087 See Response to Comment 1-002.

1-088 See Response to Comment 1-002.

1-089 See Response to Comment 1-002.

1-090 See Response to Comment 1-002.

1-091 See Response to Comment 1-002.

1-092 See Response to Comment 1-002.

1-093 See Response to Comment 1-002.

1-094 See Response to Comment 1-002.

1-095 See Response to Comment 1-002.

1-096 See Response to Comment 1-002.

1-097 See Response to Comment 1-002.

5.4.3.2 Letter 2 – Responses to Comments from Metropolitan Water District of Southern California

2-001 The comment is correct: no MWD facilities have been identified on the proposed GSEP site. The BLM acknowledges that the proposed action could result in the installation of solar power generation facilities in general proximity to MWD aqueducts and other facilities. The GSEP would not draw water from any of MWD's facilities, and would not compete with MWD for water supplies. In terms of MWD's transmission system, the proposed action would not interfere with MWD's ability to transmit power along its existing transmission lines, and would not physically interfere with, disturb, or interrupt those lines. Therefore, the BLM anticipates that the GSEP would not have any direct or indirect effect on MWD's infrastructure or operations, and, therefore, would not interfere with MWD's ability to deliver water within its service area.

2-002 In terms of MWD's transmission system, the proposed action would not interfere with MWD's ability to transmit power along its existing transmission lines, and would not physically interfere with, disturb, or interrupt those lines. Potential impacts on transmission lines are discussed in PA/FEIS Section 4.12. Recommended separation between lines also is discussed in PA/FEIS Section 4.6, Lands and Realty. Metropolitan's existing transmission system is part of the baseline condition and, as such, has been taken into account in the PA/FEIS.

2-003 The GSEP would not draw water from any of MWD's facilities, and would not compete with MWD for water supplies. As discussed in FEIS Section 4.19, proposed groundwater extraction in support of the GSEP could interfere with groundwater flows that would otherwise be tributary to the Colorado River. However, Mitigation Measures SOIL&WATER-3 and SOIL&WATER-17 require the Applicant to mitigate or completely offset these effects. Therefore, the proposed action would not interfere with any water right or MWD's ability to divert water from the Colorado River. Therefore, the BLM anticipates that the GSEP would not have any direct or indirect effect on water resources, including the Colorado River and local groundwater supplies. As discussed in PA/FEIS Section 4.19, proposed groundwater extraction in support of the GSEP could interfere with groundwater flows that would otherwise be tributary to the Colorado River. However, Mitigation Measures WATER-15 and WATER-19 require the Applicant to

mitigate or completely offset these effects. Therefore, the proposed action would not interfere with any water right or MWD's ability to divert water from the Colorado River.

2-004 PA/FEIS Section 4.19 discusses potential direct, indirect and cumulative impacts on water resources, including surface waters, including the Colorado River, and groundwater. See, e.g., PA/FEIS Section 4.19.2 (Groundwater Levels). This section also sates, "water in the Colorado River is fully appropriated."

2-005 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

2-006 The Colorado River and local groundwater supplies are identified in FEIS Section 3.20, Water Resources. Direct, indirect and cumulative impacts on such resources are discussed in FEIS Section 4.19. Projects included in the cumulative scenario, including other pending renewable energy projects within the Colorado River Basin and the local groundwater regions, are identified in FEIS Section 4.1. Accordingly, the FEIS adequately addresses the Applicant's water supply needs and any potential direct, indirect or cumulative impact on existing supplies.

5.4.3.3 Letter 3 – Responses to Comments NextEra and SolarReserve

3-001 This comment does not appear applicable to the GSEP because the establishment of a North-South utility corridor through the Solar Millennium Project site, as requested in the comment, would not result in the accommodation of an additional double circuit 230kV line that would run in parallel to the proposed gen-tie to the SCE Colorado River Substation and also would not provide access by projects to the north of the GSEP via separate transmission line corridors around the proposed GSEP either to the west or to the east.

5.4.3.4 Letter 4 – Responses to Comments from Kaiser Eagle Mountain, LLC

4-001 The BLM has identified all reasonably foreseeable future projects based on Section 6.8.3.4 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008).

5.4.3.5 Letter 5 – Responses to Comments from Colorado River Board of California

5-001 PA/FEIS Section 4.19 discusses potential direct, indirect and cumulative impacts on water resources, including surface waters, including the Colorado River, and groundwater. See, e.g., PA/FEIS Section 4.19.2 (Groundwater Levels). This section also states, "water in the Colorado River is fully appropriated."

5-002 See Response to Comment 5-001.

5.4.3.6 Letter 6 – Responses to Comments from CURE

6-001 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

6-002 Cumulative impacts are addressed in the FEIS Chapter 4.01 with a detailed listing of cumulative projects in Tables 4.1-1 and 4.1-2, and a cumulative discussion by resource in Sections 4.02 through 4.21.

6-003 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

6-004 Impacts are identified in sections 4.17 and 4.21 and Appendix E.

6-005 See FEIS Section 4.19 (Water Resources) and Appendix G (conditions of certification - soil & water). Dry cooling is the Agency's Preferred Alternative.

6-006 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

6-007 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

6-008 Section 4.17 and Appendix E address direct, impact, and cumulative impacts to vegetation resources including special status plants. Mitigating measures BIO-19, BIO-8, and BIO-14, as well as others, avoid, reduce, or compensate for special status plants, including those not found on surveys to date, as pre-construction surveys are included as mitigation. Reports regarding fall 2009 and spring 2010 surveys for rare plants and wildlife (TTEC 2010p), golden eagles (WRI 2010; TTEC 2010), a revised Biological Resources Technical Report (TTEC and Karl 2010) and the Revised Staff Assessment Supplement (CEC 2010b) were recently submitted (June, 2010 and July, 2010, respectively) and confirm or refine prior assumptions and understandings, and were used in completing the PA/FEIS.

6-009 The GSEP Golden Eagle Survey reports were submitted in June, 2010 (WMI 2010a and TTEC 2010), and clarify and confirm prior assumptions and understandings. The information was used in preparation of PA/FEIS Sections 3.23 and 4.21. Mitigation Measure BIO-12 (desert tortoise compensation) would compensate with like habitat in the same area for the lost golden eagle foraging habitat which supports as good, or better prey populations than the GSEP habitat. Mitigation measure BIO-28 remains for monitoring to ensure construction or operations features can be managed if golden eagles appear later in the project.

6-010 See responses to comments 6-044 and 12-089. Efforts to identify places of traditional cultural importance to ethnic and cultural groups are described on pages 3.4-28 through 3.4-34 and in Appendix D of the FEIS. Mitigation measures for cultural resources

affected by the GSEP are presented on pages 4.4-8 through 4.4-10 and in Appendix G of the FEIS. The BLM is complying with Section 106 of the National Historic Preservation Act (NHPA) through the completion of a Programmatic Agreement (PA) with the State Historic Preservation Officer (SHPO) and consulting parties such as Native American Tribes.

6-011 The "project setting", that is, the affected environment is thoroughly described throughout FEIS Chapter 3; the description of the proposed action is presented in Chapter 2; the indentified impacts and mitigation measures are presented in Chapter 4 and Appendix G.

6-012 All connected ancillary actions are identified in FEIS Section 2.2 and are analyzed in FEIS Chapter 4.

6-013 An updated description of the affected environment for each resource is discussed in the FEIS Sections 3.2 through 3.23. Additional surveys/studies are anticipated to be required or completed as a result of other agencies' statutory or regulatory obligations, or within specific areas of expertise. For example, the FWS Endangered Species Act Section 7 consultation, ACOE Jurisdictional Delineation, and the Section 106 Programmatic Agreement all are in progress. Each of these processes is independent of and separate from the NEPA process, and will be prepared in accordance with the schedule and procedures established in the relevant regulatory regimes. Studies required or completed in satisfaction of other agencies' requirements that become available before the ROD is issued will be evaluated by the BLM. Other agencies and the public would have the opportunity to review such reports to the full extent of the relevant governing law.

6-014 Section 4.17 and Appendix E address direct, impact, and cumulative impacts to vegetation resources including special status plants. Mitigating measures BIO-19, BIO-8, and BIO-14, as well as others, avoid, reduce, or compensate for special status plants, including those not found on surveys to date, as pre-construction surveys are included as mitigation. Reports regarding fall 2009 and spring 2010 surveys for rare plants and wildlife (TTEC 2010p), golden eagles (WRI 2010; TTEC 2010), a revised Biological Resources Technical Report (TTEC and Karl 2010) and the Revised Staff Assessment Supplement (CEC 2010x) were recently submitted (June, 2010 and July, 2010, respectively) and confirm or refine prior assumptions and understandings, and were used in completing the PA/FEIS.

6-015 See response to comment 6-014.

6-016 The GSEP Golden Eagle Survey reports were submitted in June, 2010 (WMI 2010a and TTEC 2010), and clarify and confirm prior assumptions and understandings. The information was used in preparation of PA/FEIS Sections 3.23 and 4.21. Mitigation Measure BIO-12 (desert tortoise compensation) would compensate with like habitat in the same area for the lost golden eagle foraging habitat which supports as good, or better prey populations than the GSEP habitat. Mitigation measure BIO-28 remains for

monitoring to ensure construction or operations features can be managed if golden eagles appear later in the project.

6-017 See response to comment 6-016.

6-018 Other surveys conducted for the GSEP found no wintering golden eagles (TTEC and Karl 2010). See discussion in section 4.21 on impacts to golden eagles.

6-019 See response to comment 6-016.

6-020 Surveyors found suitable breeding habitat for Couch's spadefoot toad (Scaphiopus couchi). All artificial or temporary water catchments that could serve as breeding pools for Couch's spadefoot toad were also mapped. Surveyors did detect suitable breeding habitat for this species in the borrow pit south of I-10 that crosses the Project's transmission line route near the Colorado River Substation. Habitat for this species consists of extremely xeric areas with sandy, well-drained soils, often associated with creosote bush and mesquite trees (Arizona-Sonora Desert Museum 2010). Temporary ponds created during seasonal rainstorms are important habitat for breeding. Couch's spadefoot toad breed primarily in response to summer storms, from May through September, so surveys have been scheduled for Summer or early Fall 2010 (TTEC and Karl 2010). Couch's spadefoot toad mitigation (BIO-27) limits noise and vibration requires preparing and implementing a protection and mitigation plan, and creating and protecting suitable breeding ponds. Habitat findings confirm or refine prior assumptions and understandings, and were used in completing the PA/FEIS.

6-021 See response to comment 6-020.

6-022 A great deal of current baseline information was acquired for the GSEP, including that presented in the SA/DEIS and referenced from various documents such as the Application For Certification (AFC), the Biological Resources Technical Report (TTEC and Karl 2009; TTEC and Karl 2010) and the CEC RSA. See PA/FEIS Sections 3.18, 3.22 and 3.23, which describe the affected environment for vegetation resources, wildland fire ecology, and wildlife resources, respectively. Most biological data relevant to the GSEP Study Area were collected in the last three years. Additionally, reports regarding fall 2009 and spring 2010 surveys for rare plants and wildlife (TTEC 2010p), golden eagles (WRI 2010; TTEC 2010), a revised Biological Resources Technical Report (TTEC and Karl 2010) and the Revised Staff Assessment Supplement (CEC 2010x) were recently submitted (June, 2010 and July, 2010, respectively) and confirm or refine prior assumptions and understandings, and were used in completing the PA/FEIS.

6-023 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

6-024 The GSEP Golden Eagle Survey reports were submitted in June, 2010 (WMI 2010x and TTEC 2010), and clarify and confirm prior assumptions and understandings. The

information was used in preparation of PA/FEIS Sections 3.23 and 4.21. Mitigation Measure BIO-12 (desert tortoise compensation) would compensate with like habitat in the same area for the lost golden eagle foraging habitat which supports as good, or better prey populations than the GSEP habitat. Mitigation measure BIO-28 remains for monitoring to ensure construction or operations features can be managed if golden eagles appear later in the project.

6-025 Section 4.17 and Appendix E address direct, impact, and cumulative impacts to vegetation resources including special status plants. Mitigating measures BIO-19, BIO-8, and BIO-14, as well as others, avoid, reduce, or compensate for special status plants, including those not found on surveys to date, as pre-construction surveys are included as mitigation. Reports regarding fall 2009 and spring 2010 surveys for rare plants and wildlife (TTEC 2010p), golden eagles (WRI 2010; TTEC 2010), a revised Biological Resources Technical Report (TTEC and Karl 2010) and the Revised Staff Assessment Supplement (CEC 2010x) were recently submitted (June, 2010 and July, 2010, respectively) and confirm or refine prior assumptions and understandings, and were used in completing the PA/FEIS.

6-026 The process of soil-mapping considers the interrelated factors of age, climate, vegetation, parent rock, and soil texture; and most pertinently assesses the soil for its relative susceptibility to wind erosion. Table 4.14-1 presents the results of an analysis of soil series on the site for their predicted wind erosion rates. This analysis shows that under the construction scenario, there is a negligible increase in wind erosion rates for the Arco Soil Series and an actual decrease in wind erosion rates for the Gunsight and Cipriano Series, relative to undisturbed conditions. This indicates that disturbance of the land surface during construction is unlikely to have substantial adverse effects on soil loss by wind. Further, implementation of Mitigation Measures AQ-SC3 and AQ-SC4 would control construction-related fugitive dust and address the commenter concern about possible contributions to PM-10 (see PA/FEIS Section 4.2.4 and Appendix G).

6-027 This is mostly a CEQA comment. Reducing impacts to “less than significant” levels is a requirement of CEQA, which also defines significance differently, but is not a requirement of NEPA. See response to comment 6-020.

6-028 Surveys were conducted to detect migratory birds and special status species in the GSEP study area. In addition, agency experts were contacted to determine survey needs and likely species that may occur in the GSEP study area (TTEC and Karl 2010). The Gila woodpecker is a migratory bird. Even though the Gila woodpecker was not detected and is not expected to occur in the GSEP, several mitigation measures appropriate for migratory birds would benefit the Gila woodpecker if it occurred at the GSEP (see FEIS Section 4.21).

6-029 Compensation is not proposed for cumulative impacts. Features available to bats for roosting and habitat that provides forage for bats occurs scattered throughout the lands that may be available for acquisition and conservation. The lands in the GSEP that may

be valuable for bats are all suitable desert tortoise habitat and it is reasonable to assume that like habitat suitable for the tortoise in the same area will have similar value for bats.

6-030 Mitigation measure BIO-17 is found in Appendix G. Reducing impacts to "less than significant" levels is a requirement of CEQA, which also defines significance differently, but is not a requirement of NEPA. In NEPA the impacts to the human environment are disclosed and in this case, significance is a given since an Environmental Impact Statement is being prepared.

6-031 BLM stands by the conclusions in the FEIS sections 4.21 and 4.09. Additionally, mitigation measures BIO-8 and BIO-16 would avoid or reduce impacts through seasonal work windows and pre-construction surveys and avoidance measures.

6-032 The low level of impacts is not largely because of a lack of bighorns or their sign during surveys, but the best available knowledge that a corridor lies north of the GSEP. Additionally, the GSEP location conforms to guidelines by the Society for Conservation of Bighorn Sheep recommendation of a one mile buffer from the upper edge of any solar development to the base of the mountains to protect spring foraging habitat. Reducing impacts to "less than significant" levels is a requirement of CEQA, which also defines significance differently, but is not a requirement of NEPA. In NEPA the impacts to the human environment are disclosed and in this case, significance is a given since an Environmental Impact Statement is being prepared.

6-033 The applicant did not perform a detailed cumulative impact analysis. A detailed cumulative impact analysis which includes Nelson's Bighorn Sheep is found in Appendix E. The low level of impacts is not largely because of a lack of bighorns or their sign during surveys, but the best available knowledge that a corridor lies north of the GSEP. Additionally, the GSEP location conforms to guidelines by the Society for Conservation of Bighorn Sheep recommendation of a one mile buffer from the upper edge of any solar development to the base of the mountains to protect spring foraging habitat.

6-034 Reports regarding fall 2009 and spring 2010 surveys for rare plants and wildlife (TTEC 2010p), golden eagles (WRI 2010; TTEC 2010), a revised Biological Resources Technical Report (TTEC and Karl 2010) and the Revised Staff Assessment Supplement (CEC 2010x) were recently submitted (June, 2010 and July, 2010, respectively) and confirm or refine prior assumptions and understandings, and were used in completing the PA/FEIS.

6-035 The Agency Preferred Alternative is Dry Cooling and impacts to the water table from the GSEP are not as expected as they would be in the proposed action. See section 4.19 for detailed discussion on impacts to the groundwater table and vegetation. Mitigation measures would remain in effect for water resources and biological resources.

6-036 The detailed cumulative effects analysis for wildlife and vegetation is found in Appendix E. Cumulative impact analysis is not an exercise in determining current

conditions and trends, but requires considering effects of past, present, and reasonably foreseeable actions. The Appendix includes analyses Wildlife Habitat Management Areas and connectivity corridors. It also includes an analysis of cumulative effects to special status animals such as Mojave fringe-toed lizards and special status plants.

6-037 See response to comment 6-036.

6-038 Consultation under the federal ESA and CESA concerning GSEP effects to the desert tortoise is a separate process from NEPA and is ongoing. Coordination among the agencies has been close and mitigation measures are likely to be in synchrony with any terms and conditions that could arise from section 7 consultation. The ROD will incorporate terms and conditions from the Incidental Take Statement in the Biological Opinion, if any, and mitigation measures from the FEIS. The process is discussed in Section 5.2, consultation and coordination, of the FEIS

6-039 See response to comment 6-038.

6-040 See response to comment 6-038.

6-041 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, section 4.21 and appendix E discuss direct, indirect, and cumulative impacts to the desert tortoise.

6-042 Consultation under the federal ESA and CESA concerning GSEP effects to the desert tortoise is a separate process from NEPA and is ongoing. Coordination among the agencies has been close and mitigation measures are likely to be in synchrony with any terms and conditions that could arise from section 7 consultation. The ROD will incorporate terms and conditions from the Incidental Take Statement in the Biological Opinion, if any, and mitigation measures from the FEIS. The process is discussed in Section 5.2, consultation and coordination, of the FEIS

6-043 See response to comment 6-038.

6-044 BLM's Programmatic Agreement (PA) being formulated between the respective parties will address this issue. The PA will be available for public review and signed prior to issuance of the ROD. Additional mitigation measures are outlined in 4.4.4 (summary of mitigation measures) to the extent they are consistent with the PA.

6-045 See cumulative impacts discussion for cultural resources under Section 4.4.3 (discussion of cumulative impacts).

6-046 FEIS Chapter 4.11 address the health risks associated with Therminol VP-1 and other potentially hazardous materials and Section 4.11.2.4 summarizes the mitigation measures to reduce these risks. The mitigation measures are outlined in Appendix G (conditions of certification).

6-047 See Response to Comment 6-046.

6-048 See Response to Comment 6-046.

6-049 See Response to Comment 6-046.

6-050 The FEIS Section 4.11.4.4 identifies a mitigation measure that required implementation of a program for identifying UXO during construction.

6-051 BLM's policy is to use the best available information regardless of the source and will consider all other information supported by the scientific community (see FEIS Sections 3.2 and 3.22).

6-052 See Response to Comment 6-051.

6-053 The 400 AFY of outflow attributed to groundwater underflow to the Palo Verde Mesa Groundwater Basin is accounted for in the water balance of 2,608 AFY, see Section 4.19.

6-054 Groundwater analysis is discussed in FEIS Sections 3.20 (water resources) and 4.19 (impacts on water resources). BLM's policy is to use the best available information regardless of the source and will consider all other information supported by the scientific community.

6-055 See Response to Comment 6-054.

6-056 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

6-057 See Section 3.20 and 4.19 for discussion on Water Resources and Impacts to Water Resources along with Appendix G (conditions of certification – soil & water) for mitigation measures that address this issue.

6-058 See Response to Comment 6-005

6-059 See Response to Comment 6-005.

6-060 The Applicant's construction and operation of the GSEP is subject to myriad separate and independent legal requirements, including NEPA, FLPMA, CEQA and the Warren-Alquist Act, which created and gives statutory authority to the California Energy Commission. The alleged noncompliance with CEQA and the Warren-Alquist Act is inapposite to the BLM's consideration of the proposed action under NEPA and FLPMA. Nonetheless, the secondary access road ("spur road"), approximately one third of a mile in length, will be located along the same north/south corridor as the proposed gas line to allow emergency vehicles a secondary point of access. This corridor was previously surveyed to determine impacts from the proposed gas line.

6-061 In accordance with 40 CFR 1502.22, the FEIS Chapter 2 discloses that a Phase II interconnection study involving 2,200 MW is forthcoming. The Phase I interconnection study involving 9,690 MW of generation would not result in downstream transmission impacts. Any actions as a result of the studies are not considered connected actions.

6-062 See Response to Comment 6-002.

6-063 See FEIS Sections 4.22 and 4.23.

6-064 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

5.4.3.7 Letter 7 – Responses to Comments from Center for Biological Diversity

7-001 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment

7-002 The proposed action including all connected actions and alternatives are described in FEIS Chapter 2. Biological resources of the Colorado Desert are identified in FEIS Section 3.18 (vegetation) and FEIS Section 3.23 (wildlife). Direct, indirect and cumulative impacts of the GSEP and alternatives on these resources (including rare plants, desert tortoise, and Mojave fringe-toed lizard) are discussed in FEIS Sections 4.17 (vegetation) and 4.21 (wildlife), and FEIS Appendix E. The comment questions the adequacy of the FEIS's identification and analysis of impacts, including cumulative impacts and the reasonableness of the range of alternatives considered, but does not provide a basis for the statement or provide new information relevant to the analysis. Thus, the BLM has insufficient information to provide a more detailed response. The comment is correct that the proposed action includes a gen-tie line and would rely on the Colorado substation

7-003 The environmental consequences of the proposed GSEP are analyzed on an issue-by-issue basis throughout FEIS Chapter 4. See, e.g., FEIS Section 4.17 (vegetation), FEIS Section 4.21 (wildlife), FEIS Appendix E. Impacts to the CDCA plan are fully analyzed in FEIS Section 4.08.

7-004 NEPA directs the BLM to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources" (NEPA Section 102(2)(E)). A discussion of alternatives need not be exhaustive. What is required is information sufficient to permit the BLM to make a "reasoned choice" among alternative so far as environmental aspects are concerned (40 CFR 1502.14).

In order to establish the reasonable range of alternatives to be considered, the defined project purpose and need functions as the first and most important screening tool. Thereafter, the range of alternatives is based on the applicant's proposed action,

alternatives that would reduce or avoid adverse impacts of the applicant's project, and appropriate No Action Alternatives. The full range of possible alternatives may be narrowed to a "reasonable number" that covers the full spectrum of alternatives. In determining the alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponents or others like or are capable of implementing the alternative. See BLM NEPA Handbook H-1790-1 (Jan. 30, 2008) §6.6.1.

The number and range of alternatives considered in the EIS is reasonable. In total, 24 alternatives to the proposed action were considered by the BLM. Five were carried forward, in addition to the proposed action, for more detailed review. Two of the five are action alternatives (the Reconfigured Alternative and the Dry Cooling Alternative); one is a "no action" alternative, under which no project and no CDCA Plan amendment would be approved (No Action Alternative A); and two are "no project" alternatives under which the CDCA Plan would be amended but the proposed project would not be approved (No Action Alternatives B and C). A comparison of impacts by alternative is provided in Table 2-1. The 19 alternatives that were considered but eliminated from detailed analysis, including the rationale for their elimination (40 C.F.R. 1502.14(a)), are presented in FEIS Table 2-1. This is a reasonable number of alternatives given the breadth of the BLM's statement of purpose and need. Further, the alternatives carried forward for more detailed consideration in the PA/FEIS sufficiently cover the full spectrum of alternatives because the scope of impacts assessed went from none (no action) to some (reduced acreage) to lessened in some respects (reconfigured).

7-005 See response to comments 7-004 and 13-009.

7-006 The BLM will not consider the proposed GSEP within the draft framework of the Solar PEIS. Although the BLM generally prefers to develop programmatic NEPA documentation and, thereafter, to use it as a basis for site-specific projects, the process of drafting, reviewing and considering the Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development (Solar PEIS) is not yet final.

A Notice of Intent to Prepare the Solar PEIS was published in the Federal Register on May 29, 2008. Secretarial Order No. 3285, issued March 11, 2009 by the Secretary of the Interior, announced a policy goal of identifying and prioritizing specific locations best-suited for large-scale production of solar energy. In light of this Order, the BLM and the DOE agreed to postpone completion of the Draft Solar PEIS, and, on June 30, 2009, published a Notice of Availability of maps that preliminarily identify 24 tracts of BLM-administered land for in-depth study. The scoping period was extended. The schedule to complete the Draft Solar PEIS remains "to be determined." (Solar PEIS, 2010). The schedule to complete the Final Solar PEIS or adopt the ROD also is not yet known (Id.).

The Center's comments on the PEIS and other utility-scale solar energy development proposals do not question, with reasonable basis, the accuracy of information in the EIS or the adequacy of, methodology for, or assumptions used for the environmental analysis

for this project; they also do not don't pertain to the proposed action now under consideration. Nonetheless, the BLM is considering the proposed action as required under FLPMA, NEPA and other applicable requirements. Impacts of the GSEP and alternatives are analyzed on an issue-by-issue basis throughout FEIS Chapter 4. See, e.g., FEIS Sections 4.17 and 4.23 (vegetation and wildlife species and habitats, including connectivity).

Concerning sprawl development or sprawl-related impacts, the social and economic analysis in the FEIR (see Sections 3.14, 4.13) concludes that the proposed GSEP would not induce growth. The analysis estimates the amount of growth expected to occur based on the demand for housing from construction and operations workers by evaluating the supply of suitable housing to meet the temporary housing demand of project construction and operations workers. Given the region's relatively high unemployment rates it is expected that the majority of future construction and operations workers would live within the regional study area. Any workers attracted to work at any of the construction sites may be expected to seek temporary housing (i.e., for weekly commuting) and would maintain their existing primary residence in western Riverside County, San Bernardino or elsewhere. Based on the current housing vacancy rates and availability of local hotel/motel accommodations in the local and regional study area, there is considerable potential availability for suitable temporary housing or accommodations within the existing housing stock and motel/hotel facilities especially if workers are willing to share accommodations. Consequently, the BLM does not expect that any new housing or hotel/motel growth, much less sprawl, would occur as a result of the GSEP individually, or as part of the cumulative scenario.

7-007 The proposed action including all connected actions and alternatives considered for the proposed PA and ROW are described in FEIS Chapter 2 and are analyzed in Chapter 4.

7-008 The BLM agrees with this comment and has selected the Dry Cooling Alternative as the agency's Preferred Alternative.

7-009 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

7-010 The BLM and Energy Commission cooperatively prepared the draft environmental analysis for the GSEP in accordance with NEPA and CEQA; they agreed to prepare stand-alone final documents, one for NEPA (this PA/FEIS) and one for CEQA (the RSA). The BLM participated in the analysis contained in the RSA along with reviewing the RSA to be reviewed and relied on the RSA in the preparation of this PA/FEIS because the substantive analysis and conclusions of the Federal and State environmental review processes are substantially similar even though the format of the documentation is different. The BLM has incorporated all relevant studies and documents and materials provided by the CEC into the environmental analyses presented in this FEIS (see FEIS Chapter 4).

7-011 Section 4.08 of the FEIS provides an analysis of the GSEP's potential affects concerning CDCA Multiple Use Classes. The BLM has considered alternative CDCA plan amendments as described under No Action Alternatives B and C (see Chapter 2 for description). For additional information concerning the range of alternatives considered, see response to comment 7-006.

7-012 The use of exclusion areas for BLM would not be consistent with the stated purpose and need for the GSEP project. Any proposed plan amendments for exclusion areas in the BSPP and PSPP were not carried forward for inclusion in the FEIS. Other strategies have been used to protect relocation areas from future solar development and other measures, such as relocation areas in DWMA's have been used to achieve the same effect.

7-013 The CDCA Plan is a comprehensive, long-range plan that was adopted in 1980; it since has been amended many times. As described in PA/FEIS Table 1-1, the CDCA is a 25-million-acre area that contains over 12 million acres of BLM-administered public lands within the area known as the California Desert. As described by BLM's California State Director in his letter presenting the CDCA Plan:

> The California Desert Plan encompasses a tremendous area and many different resources and uses. The decisions in the Plan are major and important, but they are only general guides to site-specific actions. The job ahead of us now involves three tasks: 1) Site-specific plans, such as grazing allotment management plans or vehicle route designation; 2) On-the-ground actions, such as granting mineral leases, developing water sources for wildlife, building fences for livestock pastures or for protecting petroglyphs; and 3) Keeping people informed of and involved in putting the Plan to work on the ground, and in changing the Plan to meet future needs.

The CDCA Plan initially was prepared and continues to provide guidance concerning the use of the California desert public land holdings while balancing other public needs and protecting resources. More specifically, it establishes goals and specific actions for the management, use, development, and protection of the resources and public lands within the CDCA. It is based on the concepts of multiple use, sustained yield, and maintenance of environmental quality. The CDCA Plan's goals and actions for each resource are established in its 12 elements, each of which provides both a desert-wide perspective of the planning decisions for one major resource or issue of public concern and a more specific interpretation of multiple-use class guidelines for a given resource and its associated activities.

The Multiple Use Class (MUC) Guidelines in Table 1 of the CDCA Plan state that solar electrical generation facilities may be allowed in an MUC Moderate (M) area after NEPA requirements are met and the CDCA Plan is properly amended. The proposed action, if approved, would amend the CDCA Plan following the process anticipated in the CDCA Plan to identify the site as suitable for the proposed solar energy use. As stated in the PA/FEIS, the CDCA Plan amendment would only apply to the BLM-administered land being evaluated for the GSEP. Accordingly, the proposed CDCA Plan amendment and the overall amendment process would be consistent with the CDCA Plan.

The CDCA Plan anticipated that renewable energy generation facilities would be proposed in the California Desert. Accordingly, it made allowances for the review of such applications, including a provision that all proposed applications "associated with power generation or transmission not identified in the [CDCA] Plan will be considered through the Plan Amendment process." (See also, PA/FEIS Sections 1.4 and 4.6). The intention of this provision was to ensure that the BLM would take a planning view of all of the renewable energy applications proposed and that such projects would require an amendment to the CDCA to maintain consistency throughout the plan. Amendments to the CDCA Plan can be site-specific or global, depending on the nature of the amendment.

Concerns from the public regarding the multiple use mission of the BLM and the loss of this large section of public land to a single use are addressed in the strict enforcement of mitigation measures for habitat and other measures that ensure a one-to-one replacement of lands lost to a single use.

7-014 See Response to Comment 7-013.

7-015 See Response to Comment 7-013.

7-016 This comment is not considered substantive. A Land Use Plan is not a component of the Affected Environment (40 CFR 1502.15).

7-017 See Response to Comment 7-013.

7-018 OHV use in the NECO portion of the CDCA is limited to individually designated open routes only. There are no existing open routes in the GSEP site. However, the GSEP's proposed linear facilities would cross five routes. Unauthorized OHV travel is monitored by BLM law enforcement officers. For a full discussion concerning OHV impacts, refer to Section 4.16.

7-019 Concerning the relationship between the proposed action and the planning process for the Solar PEIS, see response to comment 7-006. Contrary to the suggestion in the comment, prior planning has occurred to set the stage and establish parameters for the BLM's consideration of the proposed action. Additional, site-specific and action-specific, planning in the form of this FEIS and the CDCA Plan amendment process will supplement prior planning efforts. At the site-specific and project-specific level, the direct, indirect and cumulative impacts of the GSEP and alternatives is discussed in FEIS Chapter 4. Additionally, inclusion of current projects is ongoing within the programmatic document. Current projects are being reviewed in context with the PEIS to help clarify the impacts of siting these project within the CDCA. Concerning worries about sprawl, see Response to Comment 7-006.

See Connected Action Descriptions in Chapter 2, as well as, new FEIS Tables 4.01-1 and 4.01-2 and cumulative impacts section for each resource.

7-020 All connected ancillary actions warranting analysis are identified in FEIS Section 2.2 and are analyzed in FEIS Chapter 4. Because the proposed action, if approved, would come before any of the development contemplated under the Solar PEIS, it is not appropriate to in this document to analyze how the PEIS could be affected by the approval of the GSEP and other projects in the cumulative scenario. To the contrary, the impacts of the proposed action, if approved, could be considered as part of the cumulative scenario for the Solar PEIS as a past action or, if the ROD has not been issued and PA and ROW has not yet been granted, impacts of the GSEP could be considered in the Solar PEIS's cumulative scenario as a present or reasonably foreseeable action.

7-021 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

7-022 The DEIS adequately analyzes impacts on biological resources, including vegetation and wildlife. The Applicant and consultants coordinated with BLM, USFWS, CDFG, and CEC on the requirements for species-surveys and survey protocols, if any. A great deal of current baseline information was acquired for this proposed action, including that presented in the SA/DEIS and referenced from various documents such as the Application For Certification (AFC), the Biological Resources Technical Report and the CEC RSA. See PA/FEIS Sections 3.18 and 3.23, which describe the affected environment for vegetation and wildlife, respectively. Most biological data relevant to the GSEP Study Area were collected in the last three years. Additionally, reports regarding Western Burrowing Owl surveys conducted in the spring of 2010 for special-status plants, golden eagles, Nelson's Bighorn sheep, and a revised Biological Resources Technical Report were recently submitted, confirm and refine prior assumptions and understandings, and were used in completing the PA/FEIS.

7-023 The FEIS identifies and analyzes impacts (direct, indirect and cumulative) of the GSEP and alternatives on an issue-by-issue basis throughout Chapter 4. See, e.g., FEIS Section 4.18 (vegetation), FEIS Section 4.21 (wildlife), FEIS Section 4.21(water resources), and FEIS Section 4.14 (soils).

7-024 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

7-025 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

7-026 See response to comment 7.004.

7-027 The proposed CDCA Plan amendment is described in FEIS Section 1.4.2. The construction and operation of a solar generating project on the proposed site would require the BLM to amend the CDCA Plan specifically to identify the site as suitable for such use; for the GSEP, the requisite amendment would identify the proposed site as suitable for the proposed project, i.e., the GSEP. The CDCA Plan amendment for this

project would not result in changes to the Class M land use designation; instead, it would be site-specific, limited to the allowance of a solar energy use on the proposed site. Nonetheless, the PA/FEIS acknowledges an adverse cumulative impact on approximately one million acres of desert lands that are proposed for possible solar and wind energy development in the southern California Desert. Moreover, the proposed CDCA Plan amendment for the GSEP would be further limited by the accompanying right-of-way grant. The CDCA Plan amendment, if adopted, would not result in any changes in lands use designations or authorized lands uses anywhere else in the CDCA.

7-028 A review of the potential effects of climate change on the GSEP, including biological resources, is presented in FEIS Chapter 4.03, Impacts on Global Climate Change. The analysis assesses potential for climate change to affect various resources, as well as the extent to which the GSEP would influence these factors. As discussed in Chapter 4.03, the GSEP would result in a net reduction in GHG emissions, and the GHG emissions that would occur would be minor in comparison to amount of GHG emissions that would be offset by the GSEP. Therefore, additional mitigation of GHG emissions is not warranted.

Potential effects of the GSEP on wildlife resources are discussed in FEIS Chapter 3.23, Wildlife Resources and Chapter 4.21, Impacts on Wildlife Resources. Additionally, Chapter 4.03 contains a discussion of potential climate related effects on biological resources, as relevant to the GSEP. BLM concurs with the commenter regarding the importance of protecting intact wildlands and associated habitat corridors, in the face of potential climate change. The commenter suggests that the GSEP could interfere with climate change adaptation strategies, however, BLM is not aware of any existing or pending climate change adaptation planning or other strategies that are currently being implemented or proposed for implementation, that contain specific requirements or proposed management strategies or initiatives for the GSEP and its vicinity.

Unfortunately, the potential effects of future climate change on desert populations remains largely unknown, but could result in additional effects on desert wildlife, as discussed by the commenter. The potentially deleterious effects of climate change on wildlife would occur regardless of implementation of the GSEP. As discussed in Chapter 4.21, proposed mitigation would reduce the intensity of potential impacts on wildlife that would result from implementation of the GSEP, including desert tortoise and the Mojave fringe-toed lizard. Requirements for additional mitigation are not warranted.

In terms of groundwater use, the applicant has committed to moving forward with a dry cooling option (analyzed in this FEIS as the Dry Cooling Alternative). This action substantially mitigates potential water use and substantially reduces the volume of groundwater that would be required for GSEP implementation, and supports sustainable management of water resources in the Chuckwalla Valley Groundwater Basin, in order to help counter potential effects of climate change and other strain on water resources availability for human and environmental uses.

In regards to the amount of GHG emissions that would result from implementation of the GSEP, as discussed in Chapter 4.3, the GSEP would result in a net reduction in global GHG emissions. Therefore, the GSEP in and of itself serves as mitigation for global climate change. No additional analysis is warranted. Please see also response to Comment 7-071.

7-029 FEIS Chapter 2 provides a description of the Colorado River Substation expansion as well as the proposed secondary (spur) access road. These ancillary facilities are analyzed throughout FEIS Chapter 4.

7-030 Sections 3.18 on vegetation resources and 3.23 on wildlife resources characterize those resources that may be affected by the GSEP or its alternatives. A great deal of current baseline information was acquired for the GSEP, including that presented in the SA/DEIS and referenced from various documents such as the Application For Certification (AFC), the Biological Resources Technical Report (TTEC and Karl 2009; TTEC and Karl 2010) and the CEC RSA. See PA/FEIS Sections 3.18, 3.22 and 3.23, which describe the affected environment for vegetation resources, wildland fire ecology, and wildlife resources, respectively. Most biological data relevant to the GSEP Study Area were collected in the last three years. Additionally, reports regarding fall 2009 and spring 2010 surveys for rare plants and wildlife (TTEC 2010p), golden eagles (WRI 2010; TTEC 2010), a revised Biological Resources Technical Report (TTEC and Karl 2010) and the Revised Staff Assessment Supplement (CEC 2010x) were recently submitted (June, 2010 and July, 2010, respectively) and confirm or refine prior assumptions and understandings, and were used in completing the PA/FEIS.

7-031 See response to comment 6-013.

7-032 See comment 7-030.

7-033 Mitigation is identified for the Mojave fringe-toed lizard, dunes, and sand drifts over playa habitats. These are elements of the Palen-Ford WHMA. Analysis of cumulative impacts to WHMAs and Mojave fringe-toed lizard are found in Appendix E.

7-034 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

7-035 FEIS section 4.21 and Appendix E discuss direct, indirect, and cumulative impacts to the desert tortoise and its critical habitat from the GSEP, including habitat fragmentation and movement barriers. Whether or not the recovery unit(s) is (are) in one configuration or another is beyond the scope of the EIS and cannot be resolved in the EIS process.

7-036 Energy Commission Conditions of Certification are incorporated into the FEIS as proposed Mitigation Measures. They are set forth in full in Appendix G and called out in the relevant issue sections of FEIS Chapter4. Mitigation measure BIO-10 requires the applicant to develop and implement a final Desert Tortoise Translocation Plan (Plan) that

is consistent with current USFWS approved guidelines no later than 30 days before site mobilization. Further, the BLM agrees that disease testing should be a part of the Relocation/Translocation Plan. When the plan is prepared it will be made available.

7-037 See mitigation measure BIO-12 in Appendix G.

7-038 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

7-039 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

7-040 Section 4.21 and Appendix E of the FEIS discuss direct, indirect, and cumulative impacts to Nelson's bighorn sheep and burro deer. Additionally, the GSEP location conforms to guidelines by the Society for Conservation of Bighorn Sheep recommendation of a one mile buffer from the upper edge of any solar development to the base of the mountains to protect spring foraging habitat.

7-041 Mitigation ratios for indirect impacts are not mentioned in the NECO plan. The mitigation ratio for the GSEP indirect impacts cannot be compared to other referenced projects that discuss ratios for only direct impacts.

7-042 Section 4.21 discusses indirect impacts to Mojave fringe-toed lizards and residual impacts such as predators using fences at the edge of the developed area.

7-043 The DEIS adequately analyzes impacts on biological resources, including vegetation and wildlife. The Applicant and consultants coordinated with BLM, USFWS, CDFG, and CEC on the requirements for species-surveys and survey protocols, if any. A great deal of current baseline information was acquired for this proposed action, including that presented in the SA/DEIS and referenced from various documents such as the Application For Certification (AFC), the Biological Resources Technical Report and the CEC RSA. Section 4.17 and Appendix E address direct, impact, and cumulative impacts to vegetation resources including special status plants. Mitigating measures BIO-19, BIO-8, and BIO-14, as well as others, avoid, reduce, or compensate for special status plants, including those not found on surveys to date, as pre-construction surveys are included as mitigation. Reports regarding fall 2009 and spring 2010 surveys for rare plants and wildlife (TTEC 2010p), golden eagles (WRI 2010; TTEC 2010), a revised Biological Resources Technical Report (TTEC and Karl 2010) and the Revised Staff Assessment Supplement (CEC 2010x) were recently submitted (June, 2010 and July, 2010, respectively) and confirm or refine prior assumptions and understandings, and were used in completing the PA/FEIS.

7-044 Section 4.21 and Appendix E identifies potential and likely impacts from GSEP infrastructure, including fences, towers, mirrors, ponds, and powerlines. Surveys were conducted to detect migratory birds and special status species in the GSEP study area.

These studies helped identify birds in the area and a general idea of relative abundances. There is no practical way, however, to quantify hypothetical or real impacts from this project's infrastructure. Additionally, mitigation measures BIO-8 and BIO-16 would avoid or reduce impacts through seasonal work windows and pre-construction surveys and avoidance measures. Such measures can reduce impacts, but not eliminate them entirely over the life of the project.

7-045 The suggested relocation of the ponds would not decrease the impacts to wildlife. For applicable mitigation measures see Appendix G.

7-046 Section 4.21 and Appendix E identifies potential and likely impacts from GSEP infrastructure, including fences, towers, mirrors, ponds, and powerlines. Surveys were conducted to detect migratory birds and special status species in the GSEP study area. These studies helped identify birds in the area and a general idea of relative abundances. There is no practical way, however, to quantify hypothetical or real impacts from this project's infrastructure. Additionally, mitigation measures BIO-8 and BIO-16 would avoid or reduce impacts through seasonal work windows and pre-construction surveys and avoidance measures. Such measures can reduce impacts, but not eliminate them entirely over the life of the project.

7-047 Two burrowing owls cannot affect a regional distribution. A detailed cumulative impact analysis is found in Appendix E. Western burrowing owls are also discussed in FEIS Section 3.23 and impacts on them and their habitat are discussed in FEIS Section 4.21.

7-048 See Response to Comment 7-047. Concerning Energy Commission Conditions of Certification, including Bio-18, see Response to Comment 7-036. Concerning the adequacy of the data relied upon, in light of the Burrowing Owl mitigation plan, see Response to Comment 7-043. Mitigation measures have been modified slightly from those found in the DEIS to make them more clear, time-sensitive and verify their implementation. They are found in Appendix G. BIO-18 calls for a monitoring to be included in the plan. It is recognized that burrowing owl relocations are not always successful.

7-049 The FEIS discusses golden eagles in Sections 3.23 (affected environment) 4.21 (environmental consequences), and Appendix E. The GSEP Golden Eagle Survey reports were submitted in June, 2010 (WMI 2010x and TTEC 2010), and clarify and confirm prior assumptions and understandings. The information was used in preparation of PA/FEIS Sections 3.23 and 4.21. Mitigation Measure BIO-12 (desert tortoise compensation) would compensate with like habitat in the same area for the lost golden eagle foraging habitat which supports as good, or better prey populations than the GSEP habitat. Mitigation measure BIO-28 remains for monitoring to ensure construction or operations features can be managed if golden eagles appear later in the project.

7-050 The Applicant's construction and operation of the GSEP is subject to myriad separate and independent legal requirements, including NEPA, FLPMA, and the Bald Eagle and

Golden Eagle Protection Act (BEGEPA), which prohibits, except under certain specified conditions, the take, possession, and commerce of such birds. The analysis of environmental and other impacts in the FEIS is consistent with NEPA, which does not require that the EIS analyze impacts pursuant to BEGEPA. The GSEP Golden Eagle Survey reports were submitted in June, 2010 (WMI 2010x and TTEC 2010), and clarify and confirm prior assumptions and understandings. The information was used in preparation of PA/FEIS Sections 3.23 and 4.21. Mitigation Measure BIO-12 (desert tortoise compensation) would compensate with like habitat in the same area for the lost golden eagle foraging habitat which supports as good, or better prey populations than the GSEP habitat. Mitigation measure BIO-28 remains for monitoring to ensure construction or operations features can be managed if golden eagles appear.

7-051 The possibilities of collisions or electrocution are discussed in the FEIS in section 4.21.

7-052 Mitigation measure BIO-17 is found in Appendix G. Although suitable habitat occurs throughout the GSEP area, no statement was made that badgers and kit foxes occur throughout the GSEP. Any relocation/translocation effort is likely to entail risk to the translocated animal. It is recognized that translocation is an imperfect mitigation procedure.

7-053 The site's attainment status for PM-10 is acknowledged in PA/FEIS Section 3.2. While cryptobiotic soils are not specifically mentioned in the PA/FEIS, they are known to occur on older alluvial fan surfaces, along with desert pavement (see PA/FEIS Section 4.14). Both crypotbiotic soils and desert pavement are indicators of older desert soils that have not been recently flooded by desert washes, or overlain by wind-blown sands.

More specific information on the distribution and acreage of cryptobiotic soils within the GSEP is not necessary for an informed analysis of construction-related effects on wind erosion rates. This is because the process of soil-mapping considers the interrelated factors of age, climate, vegetation, parent rock, and soil texture; and most pertinently assesses the soil for its relative susceptibility to wind erosion. Table 4.14-1 presents the results of an analysis of soil series on the site for their predicted wind erosion rates. This analysis shows that under the construction scenario, there is an actual decrease in wind erosion rates relative to undisturbed conditions. This indicates that disturbance of the land surface during construction is unlikely to have substantial adverse effects on soil loss by wind. Further, implementation of Mitigation Measures AQ-SC3 and AQ-SC4 would control construction-related fugitive dust and address the commenter concern about possible contributions to PM-10 (see PA/FEIS Section 4.2.4 and Appendix G).

7-054 A discussion of desert pavement located on site is contained in FEIS Chapter 4.15, Impacts on Soils Resources. The commenter is correct that the air quality analysis does not specifically mention desert pavement. However, the analysis provided in FEIS Chapter 4.02, Impacts on Air Resources quantifies the total particulate matter emissions that would occur during construction and operation as a result of implementation of the GSEP. The emission rates shown in Tables 4.2-2 through 4.2-7 include dust emissions

from soils sources on site, including desert pavement. Mitigation proposed by the applicant and referenced within Chapter 4.02 would minimize potential impacts associated with disturbance of desert pavement, including associated air emissions.

7-055 During scoping period no issues were raised relative to insects. The Applicant and consultants coordinated with BLM, USFWS, CDFG, and CEC on the requirements for species-surveys and survey protocols and checked with the California Natural Diversity Database for occurrences of special status species in or near the GSEP study area. No special status insects occur in the GSEP study area.

7-056 The Agency Preferred Alternative is Dry Cooling and impacts expected from large ponds are not as would be expected from the proposed action. Mitigation measure BIO-21 would remain in effect even for smaller ponds to protect wildlife and reduce incidence of subsidized predators.

7-057 The proposed action would be required to comply with the requirements detailed in the Decommissioning Plan. The plan would be finalized prior to the start of commercial operation and reviewed every five years thereafter. Concerning Energy Commission Conditions of Certification, including Bio-23, see Response to Comment 7-036. Residual impacts from the project and unavoidable adverse impacts are found at the end of sections 4.17 and 4.21 for vegetation and wildlife, respectively. Decommissioning and restoration would reduce recovery time somewhat; however recovery of the site would be measured in decades, not years. The 3809 regulations are inappropriate in this case as those relate to mining law. Reference to the 3809 regulations has been stricken from the mitigating measures and discussion of decommissioning.

7-058 Sections 3.22 and 4.20 of this FEIS discuss wildland fire ecology affected environment and impacts, respectively. In addition, section 4.11, impacts to public health and safety, discusses fire and the required Fire Protection and Prevention Program prior to start of operations, and a required Operation Fire Prevention Plan. Appendix G details Mitigation requirements in Worker Safety-1 and Worker Safety-9.

7-059 The comment suggests that the EIS fails to adequately identify and analyze impacts and that the mitigation measures are thereby flawed; however, the comment does not provide specific examples. Consequently, the BLM is not able to provide a more detailed response.

7-060 All required biological resource plans would be finalized and made publicly available prior to the initiation of construction activities.

7-061 Impacts concerning habitat associated with washes and ephemeral streams as well as soils and soil transport are thoroughly analyzed in FEIS Chapter 4.

7-062 The BLM agrees with stated concerns about wet cooling and has selected the Dry Cooling Alternative as the Agency's Preferred Alternative.

7-063 See FEIS Sections 3.20 and 4.19.

7-064 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

7-065 The GSEP would use only groundwater. The GSEP not require the use of surface water for construction or operation. Groundwater levels within the Chuckwalla Valley Groundwater Basin in areas potentially affected by or hydrologically downstream of the GSEP are sufficiently below the ground's surface, such that no change in surface water infiltration rates would occur as a result of any potential GSEP-related groundwater drawdown. Flood waters associated with desert washes in the vicinity of the GSEP would be routed around the GSEP site, and would not be captured or detained. Potential effects on the Colorado River would be mitigated as discussed in Chapter 4.19, Impacts on Water Resources. Therefore, the GSEP would not interfere with any existing water rights relevant to the California Desert Protection Act or any other water right holder.

7-066 As discussed for the wet cooling alternative under Chapter 4.21, Impacts on Wildlife Resources, based on the best available data and assuming implementation of wet cooling, implementation of the GSEP would have minor effects on the McCoy spring. This analysis is based on a detailed assessment of modeled groundwater level data, which are discussed in greater detail in Chapter 4.19, Impacts on Water Resources. Additionally, please note that the applicant has committed to carrying forward the Dry Cooling Alternative for GSEP implementation, in order to ensure that potential impacts to groundwater levels, including potential effects on springs, are minimized.

7-067 The GSEP would not affect surface water rights, as discussed for response to comment 7-065. Therefore, a cumulative analysis of potential effects on surface water rights, as proposed by the commenter, would neither be applicable to the GSEP nor required. No further discussion is warranted.

7-068 Potential impacts associated with groundwater use for the GSEP are discussed in FEIS Chapter 4.19, Impacts on Water Resources. Potential effects of groundwater use on the Colorado River are also discussed in Chapter 4.19. Potential effects of groundwater use on groundwater dependent vegetation and plant communities, as well as potential effects related to springs, are discussed in Chapter 4.17, Impacts on Vegetation Resources. Potential effects of groundwater use on wildlife resources are discussed in Chapter 4.21, Impacts on Wildlife Resources. No further potential impact categories related to the depletion of groundwater were identified. Therefore, no further analysis is warranted.

7-069 Chapter 4.19, Impacts on Water Resources addresses potential effects on water rights associated with the Colorado River system, and provides applicable mitigation to reduce the intensity of such effects. In terms of groundwater use, the groundwater basin in question is not adjudicated, or is it in process for or under serious consideration for adjudication. In the absence of adjudication, no groundwater rights or allocations would be established. Therefore, pumping of groundwater from the basin would not constitute

an infringement upon another water user's right to pump groundwater, nor would it constitute a new groundwater right for the GSEP applicant. Providing additional, auxiliary analysis regarding a hypothetical and perhaps unlikely case in which the Chuckwalla Valley Groundwater Basin becomes subject to adjudication would require substantial speculation, and is not required under federal (or state) environmental law. For additional discussion of water rights, please refer to response to Comment 7-056.

Regarding the use of water off site: the environmental review process documented here only includes use of water on site. If the applicant were to use water from the GSEP off site, this use would be required, under Federal and California law, to undergo additional environmental review. To circumvent such review would be in direct violation of federal and state law. The present environmental review and associated permitting do not include off site use of pumped groundwater. Therefore, no off site of groundwater would be permitted, without further environmental review.

7-070 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

7-071 Chapter 3.03, Global Climate Change, provides an up-to-date overview of the required level of impact analysis regarding global climate change. BLM concurs with the commenter that NEPA requires a review of potential GHG emission sources and emission rates, including operations and construction. However, an assessment of life cycle emissions from materials used in the manufacture of GSEP components is not warranted, and is not provided for in existing documentation, case law, or reporting requirements. (Additionally, life cycle assessments for power generation facilities typically indicate that GHG emissions from the manufacture of materials and associated use of energy are very minor [1-2% or less] in comparison to emissions during project construction and operation.) As discussed in Chapter 4.03, Impacts on Global Climate Change, the GSEP would result in emission of approximately 53,974 MTCO2E during construction, and an additional 4,133 MTCO2E per year during operations. As discussed in the Mitigation Potential of the GSEP on Climate Change subsection of Chapter 4.03, the GSEP would offset significantly greater amounts of GHG emissions, as compared to construction and annual GSEP operation GHG emissions. Therefore, the GSEP would function to reduce GHG emissions overall, and no additional mitigation is warranted.

Heat transfer fluid would be contained within a closed-loop cycle, which would circulate the HTF from the power block out to the solar array. Leakage of HTF is expected to be minor, and HTF has not been identified as a potential contributor to GHG emissions. Note that the auxiliary boilers discussed in the FEIS would be used to heat the HTF during cold periods, and the GHG emissions from these boilers are quantified. There is no additional heating system for the HTF beyond the boilers.

For additional discussion, please refer to response to Comment 7-072.

7-072 FEIS Chapter 4.03, Impacts on Global Climate Change, quantifies SF6 emissions in terms of their global warming potential. As shown in Table 4.3-2, SF6 emissions for the entire GSEP would amount to approximately 3.4 MTCO2E over the lifetime of the GSEP. As a comparison point, emissions of other GHGs over the lifetime of the GSEP amount to 4,133 MTCO2E per year over the lifetime of the GSEP. The SF6 emissions considered within this analysis are associated with leakage from high voltage equipment (in particular, circuit breakers). Because SF6 emissions contribute to only a very minor fraction (approximately 0.08%) of the total GSEP GHG emissions, these emissions were not considered for additional mitigation.

7-073 Response: As discussed in Chapter 4.03, Impacts on Global Climate Change, implementation of the GSEP in and of itself serves as mitigation for GHG emissions. Specifically, the GSEP has an estimated GHG emission rate of 0.007 MT CO2E/MWh. This is well below the relevant GHG Emission Performance Standard of 0.500 MT CO2E/MWh, and far below typical CO2 emissions for the fossil power generation (0.35 to 1.0 MT CO2E/MWh) that the GSEP would offset. During the initial design phase, substantial effort has been made to minimize construction and operation CO2 emissions to the maximum extent practicable. Residual emissions are below applicable thresholds, and do not warrant additional, potentially costly mitigation.

7-074 The extent of PM10 emission during GSEP construction and operation is addressed in Chapter 4.02, Impacts on Air Quality. Specifically, Tables 4.2-2 through 4.2-5 summarize existing background PM10 and ozone concentrations, and also estimate the amount of PM10 and ozone that would be emitted during GSEP construction and operation. The mitigation measures provided in Chapter 4.02 would thereby provide specific and enforceable reductions in the intensity of PM10 and ozone impacts, in order to mitigate the potential for air quality impacts in accordance with NEPA.

7-075 FEIS Chapter 4.03, Impacts on Global Climate Change quantifies GHG emissions during construction and operation of the GSEP. The commenter specifically raises the issue of potential loss or destruction of existing sinks of carbon. These include losses of soil carbon from desert soils, loss of existing vegetation on site, and loss of carbon sequestration that would have occurred on site over the life of the project, if the proposed action never were to be installed/implemented. Potential carbon related effects related to land use change have been a subject of scientific, government, and interest group interest and research for the last several years, and many researchers have provided estimates of the amount of carbon contained in desert soils and vegetation, and the amount of carbon taken up annually by ecosystems in the Mojave Desert and similar climates. Estimates vary substantially based on the specific location of interest.

Campbell et al (2009) compiled several recent peer reviewed studies and other available data to assess the adequacy of a 500 MW solar thermal power plant installed in the Mojave Desert, when accounting for GHG emissions from land use change, as described above. The study compares the emissions of the solar thermal plant with a coal-fired Integrated Gasification Combined Cycle (IGCC) plant, assuming a 90% carbon capture

sequestration rate for the IGCC plant. Results from the study indicate that, over the lifetime of the solar thermal plant, the solar thermal plant would save a total of 27,916,997 metric tons (30,773,222 short tons) of carbon emissions as compared to the IGCC with 90% carbon capture. This is likely a substantial underestimate of the carbon emission savings that would occur under the proposed action for two reasons: (1) the assessment of carbon emissions for the IGCC plant does not include emissions associated with land use change at the IGCC plant or the coal mine, which would supply the IGCC plant, and (2) the IGCC assessment includes carbon capture sequestration (CCS) at a 90% capture rate. There has been much discussion regarding CCS and its potential to reduce carbon emissions from fossil power plants. However, to date, only pilot scale CCS projects have been implemented in the U.S. Therefore, the fossil power that the proposed action would displace would not include CCS. Almost all of California's fossil-based electricity is supplied from natural gas without carbon capture, and carbon emissions California's existing grid mix of power would be many times higher than the IGCC with CCS case that is considered under the proposed action. Therefore, while we acknowledge that the proposed action would result in increased carbon emissions due to land use changes on site, the total mass of carbon emitted due to these land use changes would be significantly less than the net carbon emission savings of the power plant, based on displacement of existing fossil power production.

7-076 Please refer to response to comment 12-070.

7-077 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. The comment does not provide sufficient specificity to allow for a substantive response.

7-078 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. The comment does not provide sufficient specificity to allow for a substantive response.

7-079 Cumulative impacts on desert tortoise, Mojave fringe-toed lizard, golden eagles, and sand dunes ecosystems are analyzed in FEIS Section 4.21 (wildlife resources) and FEIS Appendix E. Cumulative impacts on water resources are analyzed in FEIS Section 4.21.

7-080 As explained in Section 6.2.1 of the BLM's NEPA Handbook, the statement of purpose and need dictates the range of alternatives analyzed, because action alternatives are not "reasonable" if they do not respond to the purpose and need for the action. The narrower the purpose and need statement, the narrower the range of alternatives that must be analyzed; the converse also is true. BLM has discretion in defining the purpose and need of the proposed action (40 CFR 1502.13).

BLM's purpose and need for the proposed action, as stated in Section 1.1 of the PA/FEIS, is based on two key considerations: (i) the potential action the BLM could or would take on the specific proposed action; and (ii) the response of the BLM in meeting specific directives regarding the implementation of renewable energy projects on federally-

managed lands. The primary action that BLM is considering is a response to a specific ROW grant application from the Applicant to construct and operate a specific solar project on a specific site managed by the BLM. As a result, the BLM determined that a key purpose of this project was to determine whether to approve, approve with conditions, or deny that ROW application for a parabolic trough solar thermal electric generating facility, i.e., the GSEP.

7-081 Concerning the second access road, see response to Comment 7-029.

7-082 See response to comment 7-080.

7-083 See response to comment 7-080.

7-084 See response to comment 7-080.

7-085 See response to comment 7-080.

7-086 See response to comment 7-080.

7-087 See response to comment 7-080.

7-088 This comment is outside the scope of BLM's decision making authority.

7-089 See response to comment 7-080.

7-090 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

7-091 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

5.4.3.8 Letter 8 – Responses to Comments from California/Nevada Desert Energy Committee of the Sierra Club (Sierra Club)

8-001 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

8-002 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

8-003 Because the comment does not identify what technical flaws the SA/DEIS contained or what essential information was omitted, the BLM is unable to provide a detailed response. The analysis of impacts on groundwater supplies (PA/FEIS Section 4.19) concludes that mitigation measures would ensure that potential reductions in groundwater levels are minimized, but that some residual groundwater level reduction would occur as a result of GSEP implementation. PA/FEIS Section 4.4 finds that residual impacts on cultural resources would remain because cultural resources damaged or destroyed by

construction of the GSEP, even if subjected to mitigation, would be permanently lost from the archaeological record. Impacts on biological resources are analyzed in PA/FEIS Section 4.17, which concludes that the project would have substantial residual impacts to vegetation resources, and PA/FEIS Section 4.21, which concludes that, even with Mitigation Measures, GSEP implementation would cause residual impacts to wildlife resources such that losses would occur to habitat for, or individuals of, the desert tortoise, American badger, desert kit fox, golden eagle, migratory birds, burrowing owl and Mojave fringe-toed lizard. No indication is given in the comment concerning what alleged defect affects the analysis of cumulative impacts, which are analyzed on an issue-by-issue basis throughout Chapter 4. The BLM agrees that dry cooling is the preferred alternative.

8-004 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

8-005 NEPA procedures ensure that "high quality" environmental information is available before actions are taken (40 CFR 1500.1). A "hard look" under NEPA consists of a reasoned analysis containing quantitative or detailed qualitative information. See, BLM NEPA Handbook H-1790-1 (Jan. 30, 2008). Further, the data and analyses provided in the PA/FEIS about the affected environment should be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced (40 CFR 1502.15). The PA/FEIS relies on quantitative data where possible, and detailed qualitative data under other circumstances. The BLM may rely on the best available information if it is sufficient to allow a reasoned analysis of particular impacts, and the BLM need not necessarily postpone its consideration of a proposal while additional data is being developed –the endless loop of analysis that might otherwise result surely would lead to significant regulatory delays. Data and other information relied upon in preparing the PA/FEIS are identified in the References section.

All studies or reports that were not available prior to the SA/DEIS that subsequently have become available were analyzed in the preparation of the PA/FEIS. Each of the studies and reports clarified or complimented earlier understandings or assumptions; none has caused a substantial change in a proposed action, and none is "significant" for purposes of NEPA.

Additional surveys are anticipated to be required or completed as a result of other agencies' statutory or regulatory obligations, or within specific areas of expertise. For example, the FWS Endangered Species Act Section 7 consultation, ACOE Jurisdictional Delineation, and the Section 106 Programmatic Agreement all are in progress. Each of these processes is independent of and separate from the NEPA process, and will be prepared in accordance with the schedule and procedures established in the relevant regulatory regimes. Studies required or completed in satisfaction of other agencies' requirements that become available before the ROD is issued will be evaluated by the BLM. BLM is making every effort to complete these processes in coordination with NEPA, and to finalize these other processes before the issuance of the ROD. Other

agencies and the public would have the opportunity to review such reports to the full extent of the relevant governing law.

8-006 See response to comment 8-005.

8-007 Concerning the adequacy of the data relied upon, see response to comment 8-005. Reports regarding fall 2009 and spring 2010 surveys for rare plants and wildlife (TTEC 2010p), golden eagles (WRI 2010; TTEC 2010), a revised Biological Resources Technical Report (TTEC and Karl 2010) and the Revised Staff Assessment Supplement (CEC 2010x) were recently submitted (June, 2010 and July, 2010, respectively) and confirm or refine prior assumptions and understandings, and were used in completing the PA/FEIS.

8-008 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nevertheless, concerning the adequacy of the data relied upon, see response to comment 8-005.

8-009 Concerning the adequacy of the data relied upon, see response to comment 8-005. Information appended to the SA/DEIS was available to and accessible by members of the public. Mitigation measure BIO-10 requires the applicant to develop and implement a final Desert Tortoise Translocation Plan (Plan) that is consistent with current USFWS approved guidelines no later than 30 days before site mobilization. It will be made available when developed.

8-010 During scoping period no issues were raised relative to invertebrates. The Applicant and consultants coordinated with BLM, USFWS, CDFG, and CEC on the requirements for species-surveys and survey protocols and checked with the California Natural Diversity Database for occurrences of special status species in or near the GSEP study area. No special status invertebrates occur in the GSEP study area.

8-011 See response to comment 8-005.

8-012 See response to comment 8-005.

8-013 The BLM agrees with stated concerns about wet cooling and has selected the Dry Cooling Alternative as the Agency's Preferred Alternative.

8-014 FEIS Chapters 3.20, Water Resources and 4.19, Impacts on Water Resources provide a review of available data and information regarding water balance within the Chuckwalla Valley Groundwater Basin(CVGB), including an estimate of total basin storage. Table 3.20-6 provides an overview of aquifer characteristics, including storativity, for alluvial, Bouse, and fanglomerate formations. The 15 million acre-feet figure is based on modeling completed by WorleyParsons and AECOM (see CEC Revised Staff Assessment and associated documentation for additional details). Hypothetically speaking, even if the total recoverable storage in the CVGB were only half of that indicated in Chapter 4.19 (e.g., 7.5 million acre-feet), the cumulative effect of the GSEP,

in combination with all other reasonably forseeable projects, would still be a net reduction of only (approximately) 0.77%. This would still be only a minor proportion of total basin storage.

Also, the commenter should note that not all aquifer drawdown should be considered an environmental impact, in and of itself. It is the effect of that drawdown that can result in a potential impact. For the GSEP, aquifer drawdown would require implementation of various mitigation measures, in order to protect existing wells, ensure no reduction in flows to the Colorado River, and mitigate other potential impacts as discussed in Chapter 4.19.

8-015 The cumulative scenario is discussed in PA/FEIS Section 4.1, and includes Palen, Blythe, and Desert Sunlight in addition to other utility-scale energy projects. The Eagle Mountain Landfill project is analyzed as part of the cumulative scenario and so are various residential developments. Increased workforce-related issues and impacts are discussed and analyzed in PA/FEIS Sections 3.14 and 4.13. Contrary to the commenter's suggestion, the PA/FEIS presents the most conservative analysis reasonable under the circumstances.

8-016 The BLM agrees with stated concerns about wet cooling the Dry Cooling Alternative as the Agency's Preferred Alternative.

8-017 See response to comment 8-005.

8-018 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, consistent with BLM's Solar Energy Development Policy, ongoing monitoring of the groundwater basins will be a stipulation of the ROW grant and will be monitored by the BLM's Soil, Air and Water resources staff. The Compliance and Monitoring Program Manager will review the reports through the construction process, but will turn over long term monitoring to the Resources staff. The monitoring itself is not mitigation, but the if the results of the monitoring indicate an impact to groundwater, the applicant will be required to compensate in some form (see FEIS sections 4.14 and 4.19.

8-019 PA/FEIS Section 3.20 identifies ground subsidence as an issue of concern and analyzes related consequences in Section 4.19. Concerning the adequacy of mitigation measures that require action based on information current just prior to construction, see response to comment 8-005.

8-020 The PA/FEIS analyzes impacts of groundwater draw-down to biological resources, including vegetation, in Section 4.17, Considering the requirement that the analysis be quantified and the timing of information-gathering to inform mitigation measures, see response to comment 8-005. The BLM agrees with stated concerns about wet cooling and has selected the Dry Cooling Alternative as the Agency's Preferred Alternative.

8-021 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, the BLM agrees with stated concerns about wet cooling and has selected the Dry Cooling Alternative as the Agency's Preferred Alternative.

8-022 PA/FEIS identifies baseline conditions at McCoy Spring in Section 3.20. Concerning the adequacy of the information relied upon, see response to comment 8-005.

8-023 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

8-024 The BLM agrees with stated concerns about wet cooling and has selected the Dry Cooling Alternative as the Agency's Preferred Alternative.

8-025 In accordance with prevailing professional standards, the Class III cultural resource inventory conducted for the GSEP identified all cultural properties locatable from surface and exposed profile indications. This is considered a reasonable effort to identify historic properties that might be affected by the proposed undertaking. The geoarchaeological studies point to sediments within the project footprint that have the potential to contain archaeological materials because of their relatively recent age, stability, and proximity to topographic features (e.g. lake shoreline) used by indigenous peoples. Areas having high potential to contain buried archaeological deposits will be targeted for monitoring during construction. Any significant cultural resources discovered during construction will be treated in accordance with the Historic Properties Treatment Plan developed pursuant to the Programmatic Agreement for the GSEP.

8-026 See responses to comments 6-044 and 8-027.

8-027 The regulations implementing the National Historic Preservation Act (NHPA), found at 36 CFR Part 800, provide for the use of a Programmatic Agreement (PA) when effects on historic properties cannot be fully determined prior to approval of an undertaking. PAs commonly are used to comply with NHPA Section 106 on large projects like the GSEP. The PA for the GSEP would govern a process for completing the identification and evaluation of cultural resources that would be affected, and for determining mitigation consistent with their values, prior to construction or other activities that could affect them. The PA will be completed and signed prior to approval of the ROD. Consulting parties and stakeholders, including the State Historic Preservation Officer, the Advisory Council on Historic Preservation, and Indian tribes, will have an opportunity to participate in consultations on the terms and provisions of the PA before it is approved.

8-028 See Response to Comment 8-027.

8-029 Reducing impacts to "less than significant" levels is a requirement of CEQA, which also defines significance differently, but is not a requirement of NEPA. In NEPA the impacts to the human environment are disclosed and in this case, significance is a given since an

Environmental Impact Statement is being prepared. Reports regarding fall 2009 and spring 2010 surveys for rare plants and wildlife (TTEC 2010p), golden eagles (WRI 2010; TTEC 2010), a revised Biological Resources Technical Report (TTEC and Karl 2010) and the Revised Staff Assessment Supplement (CEC 2010x) were recently submitted (June, 2010 and July, 2010, respectively) and confirm or refine prior assumptions and understandings, and were used in completing the PA/FEIS.

8-030 Not all mitigation is in the form of compensation and there is no outright requirement for compensation of both direct and indirect impacts. Avoidance and minimization measures are also provided and discussed in Appendix G. Mitigation measures BIO-9, 10, 11, 12, and 13 directly relate to desert tortoise impact avoidance, minimization, and compensation. Other mitigation measures have at least an indirect relationship to avoidance and minimization of impacts to tortoises also, particularly BIO-1 through BIO-8 and BIO-14.

8-031 Even though the large majority of the GSEP is "outside the boundaries of "existing tortoise conservation areas," the NECO plan also recognized the value of conserving the desert tortoise in the planning area. A great deal of mitigation for the desert tortoise is proposed due to the impacts of the GSEP. Avoidance, minimization, and compensation measures are provided and discussed in Appendix G. Mitigation measures BIO-9, 10, 11, 12, and 13 directly relate to desert tortoise impact avoidance, minimization, and compensation. Other mitigation measures have at least an indirect relationship to avoidance and minimization of impacts to tortoises also, particularly BIO-1 through BIO-8 and BIO-14.

8-032 Mitigation measure BIO-10 requires the applicant to develop and implement a final Desert Tortoise Translocation Plan (Plan) that is consistent with current USFWS approved guidelines no later than 30 days before site mobilization. Further, the BLM agrees that disease testing should be a part of the Relocation/Translocation Plan.

8-033 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

8-034 Impacts to the Mojave fringe-toed lizard are found in section 4.21 and a detailed cumulative effects analysis is found in Appendix E. Additional discussion of impacts to sand transport is found in section 4.17, impacts to vegetation and 4.14, impacts to soils. Section 4.03 discusses impacts relative to global climate change. Biological resources could be affected as a result of climate change. Distribution patterns of species generally are expected to shift according to regional changes in temperature and precipitation, while the location of wildlife migration corridors and the extent of invasive species also may be altered. It would be extraordinarily difficult, if possible at all, to provide a broad-based climate analysis to a particular special-status species or habitat. Distribution patterns of species are generally expected to shift according to regional changes in temperature and precipitation, while the location of wildlife migration corridors and the extent of invasive species may also be altered. GSEP impacts on habitat fragmentation, habitat linkages, and cumulative impacts of multiple projects on corridors and

connectivity are analyzed in the PA/FEIS and are only heightened in their importance by the effects of global climate change. As discussed in Section 4.3, adverse impacts of global climate change are expected to continue; however, international, national, and regional efforts, as well as the proposed action, are expected to reduce the rate at which such change occurs, and, thereby, to benefit the environment by minimizing the environmental impacts of climate change. Appropriate climate data would be collected while groundwater monitoring and special-status species monitoring occurs. Analysis of monitoring resource and project effects would consider available climate data when evaluating trends. In addition, evaluating the importance of this population to genetic diversity and climate adaptation of the species is beyond the scope of this EIS.

8-035 NEPA directs the BLM to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources" (NEPA Section 102(2)(E)). A discussion of alternatives need not be exhaustive. What is required is information sufficient to permit the BLM to make a "reasoned choice" among alternative so far as environmental aspects are concerned (40 CFR 1502.14). The full range of possible alternatives may be narrowed to a "reasonable number" that covers the full spectrum of alternatives. In determining the alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponents or others like or are capable of implementing the alternative. The BLM "can only define whether an alternative is 'reasonable' in reference to the purpose and need for the action. See BLM NEPA Handbook H-1790-1 (Jan. 30, 2008) §6.6.1.

For the proposed action, the BLM's purpose for the project is to specifically respond to the applicant's application for a right-of-way grant to construct, operate, maintain, and decommission a solar energy generation facility on public lands in compliance with Title V of FLPMA, BLM right-of-way regulations, and other applicable Federal laws. Thus, for BLM, the range of alternatives is based on the applicant's proposed action, alternatives that would reduce or avoid adverse impacts of the applicant's project, and appropriate No Action Alternatives. The alternatives considered by the BLM must involve an action on the part of the BLM. Here, those actions are to approve or disapprove a ROW grant for the use of the GSEP site for the proposed action and to amend or not amend the CDCA Plan to allow or not allow solar on the site.

The number and range of alternatives considered in the EIS is reasonable. In total, 30 alternatives to the proposed action were considered by the BLM. Five were carried forward, in addition to the proposed action, for more detailed review. Two of the five are action alternatives: The Dry Cooling Alternative and the Reduced Acreage Alternative. The remaining three are variations of a No Action Alternative. A comparison of impacts by alternative is provided in Table 2-2. The 30 alternatives that were considered but eliminated from detailed analysis, including the rationale for their elimination (40 C.F.R. 1502.14(a)), are presented in FEIS Table 2-3.

8-036 Section 4.21 of the FEIS discusses the effects of fences on other wildlife, including the subsection on residual impacts.

8-037 See response to comment 8-035

8-038 See response to comment 6-013.

8-039 Primary constituent elements are characteristics of critical habitat and are not required to be on all lands acquired for desert tortoise compensation. Primary constituent elements do not apply to Mojave fringe-toed lizard, desert kit fox, or American badger as they are not federally listed species with designated critical habitat.

8-040 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, The DEIS and PA/FEIS identify special-status species and sensitive plant communities and analyze direct, indirect, and cumulative impacts to desert tortoise, Mojave fringe-toed lizard, special-status plants, Desert Dry Wash Woodland, Nelson's bighorn sheep, and burro deer among many others. See PA/FEIS sections 3.18 and 4.17 (vegetation), PA/FEIS sections 3.23 and 4.21 (wildlife), and the detailed cumulative impacts analysis in Appendix E.

8-041 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, the detailed cumulative effects analysis for wildlife and vegetation is found in Appendix E. Cumulative impact analysis is not an exercise in determining current conditions and trends, but requires considering effects of past, present, and reasonably foreseeable actions. The Appendix includes analyses of Wildlife Habitat Management Areas and connectivity corridors. It also includes an analysis of cumulative effects to special status animals and plants. Both the DEIS and the PA/FEIS discuss cumulative impacts to wildlife movement and connectivity.

8-042 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

8-043 The detailed cumulative effects analysis for wildlife and vegetation is found in Appendix E. Cumulative impact analysis is not an exercise in determining current conditions and trends, but requires considering effects of past, present, and reasonably foreseeable actions. The Appendix includes analyses of Wildlife Habitat Management Areas and connectivity corridors. It also includes an analysis of cumulative effects to special status animals and plants. Both the DEIS and the PA/FEIS discuss cumulative impacts to wildlife movement and connectivity.

8-044 The detailed cumulative effects analysis for wildlife and vegetation is found in Appendix E. Cumulative impact analysis is not an exercise in determining current conditions and trends, but requires considering effects of past, present, and reasonably foreseeable actions. The Appendix includes analyses of Wildlife Habitat Management Areas and connectivity corridors. It also includes an analysis of cumulative effects to

special status animals and plants. Both the DEIS and the PA/FEIS discuss cumulative impacts to wildlife movement and connectivity.

Section 4.03 discusses impacts relative to global climate change. Biological resources could be affected as a result of climate change. Distribution patterns of species generally are expected to shift according to regional changes in temperature and precipitation, while the location of wildlife migration corridors and the extent of invasive species also may be altered. It would be extraordinarily difficult, if possible at all, to provide a broad-based climate analysis to a particular special-status species or habitat. Distribution patterns of species are generally expected to shift according to regional changes in temperature and precipitation, while the location of wildlife migration corridors and the extent of invasive species may also be altered. GSEP impacts on habitat fragmentation, habitat linkages, and cumulative impacts of multiple projects on corridors and connectivity are analyzed in the PA/FEIS and are only heightened in their importance by the effects of global climate change. As discussed in Section 4.3, adverse impacts of global climate change are expected to continue; however, international, national, and regional efforts, as well as the proposed action, are expected to reduce the rate at which such change occurs, and, thereby, to benefit the environment by minimizing the environmental impacts of climate change. Appropriate climate data would be collected while groundwater monitoring and special-status species monitoring occurs. Analysis of monitoring resource and project effects would consider available climate data when evaluating trends. In addition, evaluating the importance of this population to genetic diversity and climate adaptation of the species is beyond the scope of this EIS.

8-045 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. The comment does not provide sufficient specificity to allow for a substantive response.

8-046 The cumulative scenario is described in PA/FEIS Section 4.1 (see, e.g., Tables 4.01-1 and 4.01-2) and analyzed on an issue-by-issue basis throughout Chapter 4.

8-047 See response to comment 8-035

8-048 See response to comment 8-035

8-049 See Response to Comment 8-045.

8-050 This comment states that the proposed action was not adequately analyzed under the requirements of the CDCA and FLPMA. FEIS Section 3.09 and 4.08 analyze and assess the impacts associated with the CDCA Plan. The FEIS analyzes impacts from “desert-wide” perspective in the cumulative impacts discussion presented throughout Chapter 4.

FLPMA

As indicated in PA/FEIS Sections 1.1.1 and 1.3.1, Table 1-1 and elsewhere, the BLM processes applications for commercial solar energy facilities as right-of-way

authorizations under Title V of FLPMA and Title 43, Part 2804 of the CFR. FLPMA establishes public land policy; guidelines for administration; and provides for the management, protection, development, and enhancement of public lands. In particular, the FLPMA's relevance to the proposed project is that Title V, Section 501, establishes BLM's authority to grant rights-of-way for generation, transmission, and distribution of electrical energy. The BLM is processing the Applicant's application within the FLPMA framework.

CDCA Plan

The Multiple Use Class (MUC) Guidelines in Table 1 of the CDCA Plan state that solar electrical generation facilities may be allowed in an MUC Moderate(M) area after NEPA requirements are met and the CDCA Plan is properly amended. The proposed action, if approved, would amend the CDCA Plan following the process anticipated in the CDCA Plan to identify the site as suitable for the proposed solar energy use. As stated in the PA/FEIS, the CDCA Plan amendment would only apply to the BLM-administered land being evaluated for the GSEP. Accordingly, the proposed CDCA Plan amendment and the overall amendment process would be consistent with the CDCA Plan.

The CDCA Plan anticipated that renewable power generation facilities would be proposed in the California Desert. Accordingly, it made allowances for the review of such applications, including a provision that all proposed applications "associated with power generation or transmission not identified in the [CDCA] Plan will be considered through the Plan Amendment process." (See also, PA/FEIS Sections 1.4 and 4.6). The intention of this provision was to ensure that the BLM would take a planning view of all of the renewable energy applications proposed and that such projects would require an amendment to the CDCA to maintain consistency throughout the plan. Amendments to the CDCA Plan can be site-specific or global, depending on the nature of the amendment.

Concerns from the public regarding the multiple use mission of the BLM and the loss of this large section of public land to a single use are addressed in the strict enforcement of mitigation measures for habitat and other measures that ensure a one-to-one replacement of lands lost to a single use.

NECO Plan

The NECO Plan amended the CDCA plan in 2002 to make it compatible with desert tortoise conservation and recovery efforts. As described in FEIS Table 1-1, the BLM's NECO Plan is a landscape-scale planning effort that covers most of the California portion of the Sonoran Desert ecosystem, including over five million acres and two desert tortoise recovery units. No NECO Plan amendment is proposed as part of this action. However, through the California Desert Renewable Energy Conservation Plan (DRECP) process now underway, amendments to the NECO Plan are being considered.

8-051 The GSEP is proposed for development on lands designated Multiple-Use Class M. Nonetheless, the proposed BLM-initiated amendment of the CDCA Plan. Impacts of the

GSEP are analyzed on an issue-by-issue basis throughout Chapter 4. The comment provides insufficient detail concerning the alleged failure of the SA/DEIS to identify impacts to allow the BLM to provide a substantive response.

8-052 Impacts of the CDCA Plan Amendment described in FEIS Chapter 2 are analyzed on an issue by issue basis throughout Chapter 4. See, e.g., PA/FEIS Section 4.17 concerning vegetation and Section 4.21 concerning wildlife.

8-053 Sections 3.18 on vegetation resources and 3.23 on wildlife resources characterize those resources that may be affected by the GSEP or its alternatives. Specifically, the desert tortoise and Mojave fringe-toed lizard and their habitats are discussed. A great deal of current baseline information was acquired for the GSEP, including that presented in the SA/DEIS and referenced from various documents such as the Application For Certification (AFC), the Biological Resources Technical Report (TTEC and Karl 2009; TTEC and Karl 2010) and the CEC RSA. See PA/FEIS Sections 3.18, 3.22 and 3.23, which describe the affected environment for vegetation resources, wildland fire ecology, and wildlife resources, respectively. Most biological data relevant to the GSEP Study Area were collected in the last three years. Additionally, reports regarding fall 2009 and spring 2010 surveys for rare plants and wildlife (TTEC 2010p), golden eagles (WRI 2010; TTEC 2010), a revised Biological Resources Technical Report (TTEC and Karl 2010) and the Revised Staff Assessment Supplement (CEC 2010x) were recently submitted (June, 2010 and July, 2010, respectively) and confirm or refine prior assumptions and understandings, and were used in completing the PA/FEIS.

8-054 Concerning consistency with FLPMA, see response to comment 8-050. The requisite "integrated consideration of physical, biological, economic, and other sciences," including consideration of cumulative effects on an issue-by-issue basis is provided throughout PA/FEIS Chapter 4. Concerning the adequacy of the data and information relied upon, see response to comment 8-005.

8-055 Concerning the alternatives examined, see response to comment 8-035. Cumulative impacts are addressed on an issue-by-issue basis throughout Chapter 4. The comment provides insufficient specificity for the BLM to provide a more detailed response.

8-056 Concerning consistency with FLPMA and the CDCA Plan, see response to comment 8-050. Concerning the geographic scope of analysis, which includes the CDCA.

8-057 Concerning consistency with NEPA, FLPMA and the CDCA and NECO Plans, see response to comment 8-050. CEQA consistency is beyond the scope of the PA/FEIS.

8-058 Concerning the range of alternatives considered, including the Dry Cooling Project Alternative, which is BLM's preferred alternative, see response to comment 8-005.

8-059 The Class III cultural resource inventory for the GSEP identified observable cultural resources within the GSEP Area of Potential Effects, including those along the ancient

shoreline of Ford Dry Lake. These cultural resources are described in section 3.41 of the FEIS. The analysis of impacts for the resources identified is presented in section 4.4 of the FEIS. Mitigation measures for cultural resources affected by the GSEP are presented on pages 4.4-8 through 4.4-10 and in Appendix G of the FEIS. Mitigation will include monitoring to identify any buried cultural resources along the ancient shoreline that may be discovered during construction. Specific treatment measures for cultural resources that will be affected by the GSEP, including any buried cultural resources that are discovered during construction, will be implemented as part of a Historic Properties Treatment Plan pursuant to a Programmatic Agreement being developed for the project.

5.4.3.9 Letter 9 – Responses to Comments from Western Watersheds Project

9-001 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

9-002 See FEIS Table 2 -1 Comparison of Impacts by Alternative. In total, 25 Alternatives were considered by BLM, see revised Table 2-1 in the FEIS, Alternatives Considered But Eliminated.

9-003 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, impacts to the desert tortoise and its critical habitat are discussed in FEIS section 4.21 and Appendix E.

9-004 FEIS Section 4.21 and Appendix E discuss impacts to the desert tortoise and its critical habitat from the GSEP, including fragmentation and movement. Whether or not the recovery unit(s) is (are) in one configuration or another is beyond the scope of the EIS and cannot be resolved in the EIS process.

9-005 Potential impacts to wildlife species are assessed in Chapter 4.21, Impacts on Wildlife Resources, which includes mitigation to minimize potential wildlife impacts. The BLM acknowledges that future climate change could result in effects on migration patterns for wildlife, including the desert tortoise, including shifts northward and/or to higher elevations. Potential reductions in the viability of lands identified as “refuges” for desert tortoise are an unfortunate effect of climate change. However, beyond those impacts discussed in Chapter 4.21, the GSEP is not anticipated to intensify warming or other effects of climate change on area wildlife. Therefore, no additional discussion, analysis, or mitigation is warranted. Please see also response to Comment 7-028.

9-006 FEIS Section 4.21 and Appendix E discuss direct, indirect, and cumulative impacts to the desert tortoise and its critical habitat from the GSEP and its alternatives. These analyses were based on detailed surveys as reported in TTEC and Karl 2010 and other sources. Impacts of open ponds as hazards to wildlife and also as predator-subsidizing attractants are discussed in section 4.21 also. There are no designated open routes in the GSEP area. Ford Dry Lake is not an open recreation area.

9-007 Impacts to the Mojave fringe-toed lizard are found in section 4.21 and Appendix E. Additional discussion of impacts to sand transport is found in section 4.17, impacts to vegetation and 4.14, impacts to soils.

Reducing impacts to "less than significant" levels is a requirement of CEQA, which also defines significance differently, but is not a requirement of NEPA. In NEPA the impacts to the human environment are disclosed and in this case, significance is a given since an Environmental Impact Statement is being prepared.

9-008 Reports regarding fall 2009 and spring 2010 surveys for rare plants and wildlife (TTEC 2010p), golden eagles (WRI 2010; TTEC 2010), a revised Biological Resources Technical Report (TTEC and Karl 2010) and the Revised Staff Assessment Supplement (CEC 2010x) were recently submitted (June, 2010 and July, 2010, respectively) and confirm or refine prior assumptions and understandings, and were used in completing the PA/FEIS.

9-009 Section 4.17, impacts to vegetation resources discusses GSEP impacts to the spread or proliferation of weeds. A weed management plan will be developed under mitigation measure BIO-14. Control options under the plan will conform to the NECO plan and BLM's 2007 Record Of Decision for the Programmatic EIS for Vegetation Treatments using Herbicides on Bureau of Land Management lands in 17 western states.

9-010 McCoy Spring National Register District will not be directly impacted by the GSEP. Possible indirect impacts to this National Register District are discussed on page 4.4-4 of the FEIS. Evaluations and consultations carried out with Indian tribes pursuant to the Programmatic Agreement being developed for the GSEP will determine whether any Native American traditional values ascribed to the McCoy Springs site will be affected by the GSEP. With respect to other cultural resources, all cultural resource surveys have been completed, and the results of those surveys are described on pages 3.4-28 through 3.4-39 of the FEIS. Analysis of impacts for the cultural resources affected by the GSEP is presented in 4.4 of the FEIS.

9-011 See FEIS Section 3.21 Water Resources, and Section 4.19 Impacts on Water Resources.

5.4.3.10 Letter 10 – Responses to Comments from National Park Service – Joshua Tree National Park

10-001 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

10-002 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

10-003 Your request for BLM to amend the CDCA/NECO plans to expand the two DWMAs is outside the scope of this FEIS.

10-004 See FEIS Section 4.21 Wildlife Resources.

10-005 See FEIS Section 3.21 Water Resources, and Section 4.19 Impacts on Water Resources, and FEIS Table 4.01-1 and Table 4.01-2 describing the cumulative approach and list of cumulative projects BLM considers reasonably foreseeable.

10-006 The GSEP is not located west of the Palen Mountains, therefore this comment does not appear to apply to the GSEP. However, the DEIS has analyzed both the project-specific and cumulative impacts to wilderness users due to visual disturbance caused by the GSEP. The impact of the proposed action and alternatives is discussed in Section 4.18-2, and the impact in combination with past present and foreseeable future projects is discussed in Section 4.18-3.

10-007 CEQA requirements, including a determination of impact significance, are not applicable in the NEPA context

10-008 CEQA requirements, including a determination of impact significance, are not applicable in the NEPA context.

10-009 The commenter proposes to use a basin storage value of 9.1 million acre-feet, as compared to 15 million acre-feet, citing that the 9.1 million acre-feet storage value is a more conservative estimate and is consistent with documentation from a pumped hydrologic storage project in the vicinity of the GSEP. The studies completed by WorleyParsons in support of the GSEP were completed as recently as 2009. These studies were completed with the most recent and up-to-date data available, and represent the most up-to-date information that is available that is directly relevant and applicable to the GSEP. Utilizing documentation prepared in support of a separate project, which likely includes significantly different study and boundary assumptions, is not anticipated to result in greater accuracy in terms of basin storage estimates, as relevant to the GSEP, and would not be consistent with other BLM documentation for regional solar power projects. Therefore, no further analysis is warranted.

10-010 The BLM recognizes a need for consistency among groundwater storage parameters, water balance parameters, and other relevant hydrologic resources information. In coordination with the CEC and the GSEP applicant, BLM has made a substantial effort to ensure consistency among projects. However, by the simple nature of the various projects, some variation among groundwater and surface water analysis parameters is warranted. For instance, projects located within one groundwater basin or subbasin would be subject to very different conditions, as compared to those located in a separate basin or subbasin. Additionally, the documentation and analysis provided in support of the GSEP and other projects represents significant contributions by many different agencies, contractors, consultants, engineers, and BLM staff. Typically, staff, agency, and engineering/contractor personnel are not entirely consistent among the many projects that BLM is reviewing. Therefore, while BLM, the CEC, and the GSEP applicant have endeavored to maintain as much consistency among documents as possible, some discrepancies will no doubt remain.

10-011 CEQA requirements, including a determination of impact significance, are not applicable in the NEPA context

10-012 As discussed in Chapter 3.20, Water Resources, and 4.19, Impacts on Water Resources, groundwater levels in the vicinity of the GSEP remained relatively stable up until the 1980s, when agricultural pumping reduced groundwater levels in some areas. These reductions are reflected in some of the groundwater level data collected immediately north of Desert Center (FEIS Figure 3.20-8). Unfortunately, groundwater levels were not consistently measured, and none of the well data available provide a complete dataset of well levels from before increased agricultural pumping in the 1980s through present. However, taken together, the well level data shown in Figure 3.20-8 are consistent with increased pumping during the 1980s, followed by a reduction in pumping by the early 1990s, followed by a period of groundwater level recovery. This scenario, of recently recovering groundwater levels, is consistent with the basin balance information presented in the FEIS, which indicates that net inflow to the basin exceeds net outflow. The commenter posits a lack of recent increases in groundwater levels as a means for support of an existing groundwater balance deficit. However, there is no evidence that groundwater levels are decreasing at present. Additionally, the groundwater basin balance analysis presented in the FEIS is more recent, and is considered more applicable to the GSEP, than the older Eagle Crest Energy assessment cited by the commenter. Please see also response to Comment 10-009. No additional updates were made.

10-013 The referenced figure has been incorporated into the FEIS as Figure 3.20-8. The groundwater level graphics included in this figure serve dual purposes: to compare groundwater levels among wells and also to provide a visual overview of long-term groundwater level trends in the basin. Unfortunately, none of the datasets available provides a complete review of historic groundwater level trends at a single well. That level of detail is not easy to visually assess based on available data, without the use of sophisticated models and analysis. The commenter mentions that the existing scale is not conducive to detecting changes in water level on the order of several feet. Unfortunately, the data available are not conducive to detecting changes in water level at this resolution, no matter how they are displayed, without substantial additional modeling and analysis (discussed elsewhere in the text of Chapter 3.20 and Chapter 4.19). In our opinion, these graphic representations of groundwater level data are more useful, especially for the lay reader, to compare the relative depth to groundwater occurring at various points in the basin. Therefore, no updates to the vertical scale of the graphs were made. For additional information regarding historic trends in groundwater levels, the commenter is referred to the text of Chapter 3.20 and Chapter 4.19.

10-014 Based on the design criteria provided by the applicant for the technology being employed at the GSEP site, the construction water use estimates provided in the FEIS represent reasonable and the most current and accurate calculations available for the GSEP. Although all of the projects mentioned by the commenter would be installed within relatively close proximity to each other, soil, grading, earthwork, topography, and technology characteristics vary substantially based on both the technology that would be

implemented and the specific conditions at each project site. The construction water use calculations represent the most reasonable and accurate estimates available. However, only the amount of water required for construction and associated activities will be pumped during the construction period. If a smaller volume of water is required than initially anticipated, that additional water will not be removed from the aquifer.

10-015 FEIS Section 3.21 Water Resources and Section 4.19 Impacts on Water Resources present the correct data.

10-016 See FEIS Section 3.21 Water Resources, and Section 4.19 Impacts on Water Resources. Also See FEIS Table 4.01-1 and Table 4.01-2 describing the cumulative approach and list of cumulative projects BLM considers reasonably foreseeable.

10-017 The model used by AECOM is based on the USGS model referenced by the commenter, but was modified slightly to account for GSEP-specific properties. Additional documentation on the properties of this model can be found in the CEC's Revised Staff Assessment and supporting documentation for the GSEP. This second modeling effort was used to assess potential for impacts to the Colorado River system. This second modeling effort was not included in the applicant's initial analysis, because the applicant was not at that time aware that there was potential for the GSEP to affect the Colorado River. Only through the CEC's separate environmental assessment process did potential effects on the Colorado River come to light. Therefore, these effects were modeled subsequent to the initial groundwater modeling effort completed by WorleyParsons.

10-018 Potential cumulative impacts to groundwater levels that would result from implementation of the GSEP, in combination with other reasonably foreseeable projects (as discussed in FEIS Chapter 4.1, Introduction), are discussed in Chapter 4.19, Impacts on Water Resources. Mitigation measures, which would reduce or minimize the potential cumulative contributions of the GSEP on groundwater levels, are included. These measures include regional monitoring of groundwater levels. Additionally, the applicant has recently committed to implementation of the Dry Cooling Alternative as its new preferred alternative, which would substantially reduce the potential groundwater withdrawal requirements of the GSEP during operations. Requiring oversight of the groundwater level monitoring program by an outside agency such as the USGS or California Department of Water Resources would be inefficient in terms of agency coordination and cost, and the proposed mitigation monitoring plan is expected to be sufficient to meet such needs. Therefore, additional mitigation is not warranted.

10-019 FEIS Chapter 4.02, Impacts on Air Quality, assesses potential construction and operation period fugitive dust emissions, including dust emissions from disturbed soils, and provides mitigation to reduce the intensity of these effects. For additional discussion, please refer to FEIS Chapter 4.02, and to response to Comments 7-074 and 7-054.

10-020 Emissions of fugitive dust, including PM10 and PM2.5, are discussed in FEIS Chapters 3.02, Air Resources, and 4.02, Impacts on Air Resources. The discussion provided

includes a review of the potential release of PM10 and PM2.5 from the GSEP, wherein emissions were modeled as area sources. Total construction period emissions are shown in Table 4.2-4, while operation period emissions are shown in Table 4.2-5. Substantial mitigation has been incorporated into the GSEP in order to offset these potential fugitive dust emissions. Chapter C.1, Air Quality of the Revised Staff Assessment provides a complete review of these measures, which include revegetation, covering with gravel or dust suppressant, installation of wind breaks, use of chemical dust suppressants, and other measures. These are also included as Mitigation Measures AQ-SC1 through AQ-SC5 in Appendix G of the FEIS.

10-021 FEIS Chapter 4.02, Impacts on Air Quality, assesses potential construction and operation period fugitive dust emissions, including dust emissions from disturbed soils, and provides mitigation to reduce the intensity of these effects. Also, see response to comment 10-22 below.

10-022 The boundary of Joshua Tree National Park is shown in Figure 3.19-3 (West of Highway 177), which provides a viewshed map of the proposed project. The closest distance between the boundaries of Joshua Tree National Park and the GSEP footprint is over 15 miles, placing the park in the "seldom seen" distance zone (as defined in BLM Manual H-8410-1). From this location, and from most viewing locations within the Park, views of the GSEP would be screened by intervening mountains in the Palen-McCoy Wilderness. While some locations in the far southern portion of the national park could have an unobstructed line of sight, these places are located over 25 miles away from the GSEP footprint. For these reasons, a description of the current view from prominent overlooks in the park is not necessary. Even during optimum atmospheric conditions, the GSEP area would be indistinguishable from other elements in far background views, if visible at all.

10-023 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment

10-024 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment

10-025 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, Impacts to and mitigation for, the Mojave fringe-toed lizard is discussed in FEIS section 4.21 and Appendices E and G, respectively.

10-026 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. However, these lands were use for livestock grazing until the NECO plan eliminated that use, and none of the fastrack projects are located in critical habitat.

5.4.3.11 Letter 11 – Responses to Comments from Brendan Hughes

11-001 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

11-002 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, environmental consequences of the proposed action on wildlife resources are discussed in FEIS Section 4.21, which acknowledges unavoidable, adverse impacts and that "the GSEP and the proposed alternative would result in substantial impacts to sensitive wildlife resources, and would permanently diminish the extent and value of native animal communities in the region." The FEIS further acknowledges specific impacts to the Desert Tortoise.

11-003 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, environmental consequences of the proposed action and alternatives on vegetation are discussed in FEIS Section 4.17, which acknowledges unavoidable, adverse impacts and that "the GSEP and other action alternatives would result in substantial impacts to sensitive vegetation resources, and would permanently diminish the extent and value of native plant and animal communities in the region."

11-004 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, environmental consequences of the proposed action and alternatives on cultural resources are discussed in FEIS Section 4.4. Furthermore, Section 4.4 acknowledges unavoidable, adverse impacts and that "the ground disturbance that would occur from the GSEP would result in unavoidable adverse impacts on cultural resources through damage and displacement of artifacts, loss of integrity of cultural resources, and changes in the settings of cultural resources inconsistent with their historic or traditional cultural values."

11-005 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, environmental consequences of the proposed action and alternatives on visual resources are discussed in FEIS Section 4.18, which acknowledges unavoidable, adverse impacts and that "the GSEP would cause one substantial adverse impact that cannot be mitigated: adverse cumulative impacts for travelers along I-10 and dispersed recreational users in the Palen-McCoy Wilderness and other surrounding mountains."

11-006 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, environmental consequences of the proposed action and alternatives on water resources are discussed in FEIS Section 4.19. Furthermore, the BLM has selected the Dry Cooling Alternative as the agency's Preferred Alternative, which would significantly reduce groundwater use.

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12-001 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-002 Alternatives, including alternative technologies, sites and footprints, are identified in PA/FEIS Sections 2.2 through 2.6.

12-003 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, the BLM will continue to exercise its land management authority consistent with all of the statutes, regulations and policies that govern this authority.

12-004 BLM acknowledges this comment; however, the comment provides an opinion about the overall adequacy of the EIS and does not provide comment or concerns regarding a specific issue. Therefore, pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-005 The BLM agrees with stated concerns about wet cooling. Direct dry cooling involves fans blowing air over a radiator system, known as the air-cooled condenser (ACC) to remove heat from the system via convective heat transfer. Steam from the steam turbine exhausts directly to a manifold radiator system that rejects heat to the atmosphere, condensing the steam inside the radiator. On extremely hot days, a wet-surface air cooler (WSAC) system will be used to provide auxiliary cooling. These systems are described in chapter two and analyzed in chapter four. The BLM has selected the Dry Cooling Alternative as the agency's Preferred Alternative because the Dry Cooling Alternative would reasonably accomplish the purpose and need for the Proposed Action while fulfilling BLM's statutory mission and responsibilities, giving consideration to economic, environmental, technical, and other factors.

Many comments expressed opposition to wet cooling and the associated impacts. The BLM agrees that wet cooling is not an appropriate technology for a desert environment due to associated environmental impacts. Accordingly, because the BLM would not approve a wet cooling option, no further response is necessary.

12-006 The number and range of alternatives considered in the EIS is reasonable. In total, 26 alternatives to the proposed action were considered by the BLM. Five were carried forward, in addition to the proposed action, for more detailed review. Two of the five are action alternatives (the Reduced Acreage Alternative and the Dry Cooling Alternative); one is a "no action" alternative, under which no project and no CDCA Plan amendment would be approved (No Action Alternative A); and two are "no project" alternatives under which the CDCA Plan would be amended but the proposed project would not be approved (No Action Alternatives B and C). A comparison of impacts by alternative is provided in Table 2-5. The 21 alternatives that were considered but eliminated from detailed analysis, including the rationale for their elimination (40 C.F.R. 1502.14(a)), are

presented in FEIS Table 2-6. This is a reasonable number of alternatives given the breadth of the BLM's statement of purpose and need. Further, the alternatives carried forward for more detailed consideration in the PA/FEIS sufficiently cover the full spectrum of alternatives because the scope of impacts assessed went from none (no action) to some (reduced acreage) to lessened in some respects (reconfigured).

In addition, the BLM will implement mitigation measures (Mitigation Measures BIO-9 through BIO-13), which have been developed in coordination with the USFWS and CDFG and meet the requirements under Section 2081 of the California Fish and Game Code, to reduce impacts to desert tortoises. Accordingly, no further response is necessary.

12-007 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, impacts on groundwater and ephemeral washes are analyzed in PA/FEIS Section 4.19, mitigation for impacts to biological resources and special status species are identified in PA/FEIS Sections 4.17 and 4.21, cumulative impacts to air quality are addressed in PA/FEIS Section 4.2, and the range of alternatives is addressed in the response to comment 12-006. Impacts to cultural resources are analyzed in PA/FEIS Section 4.4.

Regarding purpose and need, as explained in Section 6.2.1 of the BLM's NEPA Handbook, the statement of purpose and need dictates the range of alternatives analyzed, because action alternatives are not "reasonable" if they do not respond to the purpose and need for the action. The narrower the purpose and need statement, the narrower the range of alternatives that must be analyzed; the converse also is true. BLM has discretion in defining the purpose and need of the proposed action (40 CFR 1502.13).

BLM's purpose and need for the proposed action, as stated in Section 1.1 of the PA/FEIS, is based on two key considerations: (i) the potential action the BLM could or would take on the specific proposed action; and (ii) the response of the BLM in meeting specific directives regarding the implementation of renewable energy projects on federally-managed lands. The primary action that BLM is considering is a response to a specific ROW grant application from the Applicant to construct and operate a specific solar project on a specific site managed by the BLM. As a result, the BLM determined that a key purpose of this project was to determine whether to approve, approve with conditions, or deny that ROW application for a parabolic trough solar thermal electric generating facility, i.e., the GSEP.

12-008 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, the BLM appreciates the EPA's input concerning its special expertise.

12-009 The BLM agrees with stated concerns about wet cooling. See response to comment 12-005, above.

12-010 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, see response to comment 12-005 concerning wet cooling and dry cooling (the BLM's Preferred Alternative).

12-011 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, see response to comment 12-005 concerning wet cooling and dry cooling (the BLM's Preferred Alternative).

12-012 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, see response to comment 12-005 concerning wet cooling and dry cooling (the BLM's Preferred Alternative).

12-013 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, see response to comment 12-005 concerning wet cooling and dry cooling (the BLM's Preferred Alternative).

12-014 Mitigation includes specific means, measures or practices that would reduce or eliminate effects of the proposed action or alternatives. Mitigation may be used to reduce or avoid adverse impacts, whether or not they are significant in nature. Reasonable, relevant mitigation measures that could improve the project are identified in Appendix G and are called out on an issue-by-issue basis in Chapter 4, regardless of agency jurisdiction. BLM-specific mitigation measures, developed consistent with CEQ guidance, also are identified and generally work in coordination with the Energy Commission's conditions of certification. Mitigation measures are identified to reduce or eliminate adverse effects to biological, physical, or socioeconomic resources even in instances where the precise extent of impacts is somewhat uncertain because of the complexity of the issues or variability, such as is the case with mitigation measures WATER-5 through WATER-7.

In this context, mitigation measures that predicate future actions and obligations on data, analysis and results of future studies do not improperly defer mitigation or deprive the public of a meaningful opportunity to comment on the adequacy of the mitigation measures. To the contrary, the mitigation measures proposed in the PA/FEIS provide performance standards that are sufficiently detailed to allow for meaningful agency and public review. In addition, Section 4.19, under the subheading, Residual Impacts After Mitigation Measures Are Implemented, provides a discussion regarding the residual impacts of mitigation measures after they are implemented.

12-015 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. However, the Agency Preferred Alternative is Dry Cooling and impacts to the water table from the GSEP are not expected as they would be in the proposed action.

12-016 The Agency Preferred Alternative is Dry Cooling and impacts to the water table from the GSEP are not expected as they would be in the proposed action. See Section 4.19 for

detailed discussion on impacts to the groundwater table and vegetation. Mitigation measures would remain in effect for water resources and biological resources.

12-017 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, groundwater basin balance is addressed in PA/FEIS Section 4.19. In addition, NEPA procedures ensure that "high quality" environmental information is available before actions are taken (40 CFR 1500.1). A "hard look" under NEPA consists of a reasoned analysis containing quantitative or detailed qualitative information. See, BLM NEPA Handbook H-1790-1 (Jan. 30, 2008). Further, the data and analyses provided in the PA/FEIS about the affected environment should be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced (40 CFR 1502.15). The PA/FEIS relies on quantitative data where possible, and detailed qualitative data under other circumstances. The BLM may rely on the best available information if it is sufficient to allow a reasoned analysis of particular impacts, and the BLM need not necessarily postpone its consideration of a proposal while additional data is being developed –the endless loop of analysis that might otherwise result surely would lead to significant regulatory delays. Data and other information relied upon in preparing the PA/FEIS are identified in the References section.

12-018 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. However, as noted above, the Agency Preferred Alternative is Dry Cooling and impacts to the water table from the GSEP are not expected as they would be in the proposed action. Mitigation measures would remain in effect for water resources.

12-019 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, see response to comment 12-014.

12-020 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, see responses to comments 12-014 and 12-017.

12-021 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, see responses to comments 12-014 and 12-017.

12-022 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, see Section 4.1, which identifies energy projects, projects along the I-10 corridor and others as within the cumulative scenario, and Chapter 4, which addresses cumulative impacts on an issue-by-issue basis.

12-023 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, groundwater basin balance is addressed in PA/FEIS Section 4.19. See response to comment 12-017.

12-024 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, impacts (including cumulative impacts) on the groundwater basin are analyzed in PA/FEIS Section 4.19, and Mitigation Measures are recommended that would require monitoring and further action as appropriate (see mitigation measures WATER-5 through WATER-7).

12-025 The potential growth-inducing impacts of the GSEP are analyzed in PA/FEIS Section 4.13.

12-026 Alternatives, including those eliminated from further consideration, are addressed in response to comment 12-006. The requested evaluation of potential sources of reclaimed water from all wastewater treatment plants within a 40-mile radius is beyond the scope of this PA/FEIS.

12-027 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-028 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-029 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-030 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-031 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, impacts on downstream flows are analyzed in PA/FEIS Section 4.19.

12-032 Drainage features are discussed and analyzed in PA/FEIS Sections 3.20 and 4.19. NEPA requires the consideration of alternatives to the proposed action, not to specific elements of the proposed action; thus, questions of the feasibility of various drainage options are beyond the scope of this PA/FEIS.

12-033 The final drainage plan would not change the analysis of impacts, but only clarify those impacts. Inclusion of the final drainage plans in the Final POD will solidify the design, but not change the impacts.

12-034 Stormwater flows and impacts area identified and analyzed in PA/FEIS Sections 3.20 and 4.19. The comment does not provide a basis for any need to clarify the related information that was provided in the SA/DEIS; consequently, clarification has not been made.

12-035 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, mitigation measures for impacts to desert washes are identified in FEIS Section 4.19and Appendix G.

12-036 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-037 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-038 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, surface water-related impacts are analyzed and related mitigation measures identified in PA/FEIS Section 4.20.

12-039 See Response to Comment 12-038.

12-040 Consistency with the identified policies is considered in the Energy Commission's CEQA process for the GSEP. Analyzing consistency with these State law policies is beyond the scope of analysis for the BLM.

12-041 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-042 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, see Response to Comment 12-040.

12-043 See Response to Comment 12-040.

12-044 Proposed fencing is unlike the fencing described in the cited study, which is situated such that monsoonal desert flood flows must pass through the fence. Identified effects included floodwater pooling and backup behind the fence, and significant debris collection along the fence. The fencing that would be installed at the GSEP site would be very different compared to purpose and design, as compared to the fencing in the referenced study. The fencing proposed for the GSEP would provide a barrier to human crossing onto the site, and would be located along the proposed flood control berms and other features that would protect the GSEP from flooding. The proposed fence is not anticipated to intersect significant or substantial flood flows, and therefore would not have effects similar to the referenced National Parks study. However, the BLM and the Applicant acknowledge that the proposed fencing could affect drainage on a smaller scale – if improperly managed or installed, fencing could potentially exacerbate erosion or sedimentation conditions on site and adjacent to the site, for instance resulting in undercutting of the fence, buildup of small amounts of debris along the fence line, and other related issues. Implementation of Mitigation Measure WATER-10 of the PA/FEIS Section 4.19 would provide for adherence to the recommendations of a drainage plan, which would include fencing-related drainage and erosion/sedimentation considerations.

Implementation of this mitigation measure would reduce potential impacts to less than significant levels.

12-045 The ACOE Jurisdictional Delineation process is independent of and separate from the NEPA process, and will be completed in accordance with the relevant statutory and regulatory requirements. If the final determination becomes available before the ROD is issued, it will be evaluated by the BLM. BLM is making every effort to ensure that the parties finalize the process before BLM issues a ROD for the GSEP.

12-046 Decommissioning and restoration would reduce recovery time somewhat, however recovery of the site would be measured in decades, not years.

Consultation under the federal ESA and CESA concerning GSEP effects to the desert tortoise is a separate process from NEPA and is ongoing. Coordination among the agencies has been close and mitigation measures are likely to be in synchrony with any terms and conditions that could arise from section 7 consultation. The ROD will incorporate terms and conditions from the Incidental Take Statement in the Biological Opinion, if any, and mitigation measures from the FEIS. The process is discussed in Section 5.2, consultation and coordination, of the FEIS.

12-047 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, sections 4.17 and 4.21 of the FEIS have refined acreage figures for the various alternatives.

12-048 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-049 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, see response to comment 12-006 concerning alternatives.

12-050 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, mitigating measures, including those that avoid or minimize impacts are included in BIO-1 through BIO-29 and are found in Appendix G.

12-051 Consultation under the federal ESA and CESA concerning GSEP effects to the desert tortoise is a separate process from NEPA and is ongoing. Coordination among the agencies has been close and mitigation measures are likely to be in synchrony with any terms and conditions that could arise from section 7 consultation. The ROD will incorporate terms and conditions from the Incidental Take Statement in the Biological Opinion, if any, and mitigation measures from the FEIS.

12-052 The requested information is provide in PA/FEIS Tables ES-1 and ES-2 and Table 2-1, which compares the environmental impacts of the proposed action to those of each of the alternatives.

12-053 The Biological Opinion (BO) process is independent of and separate from the NEPA process; the BO will be prepared in accordance with the schedule and procedures established in the Endangered Species Act and implementing regulations. The BLM is making every effort to complete this process in coordination with NEPA, and to finalize it before the issuance of the ROD.

12-054 Consultation under the federal ESA and CESA concerning GSEP effects to the desert tortoise is a separate process from NEPA and is ongoing. Coordination among the agencies has been close and mitigation measures are likely to be in synchrony with any terms and conditions that could arise from section 7 consultation. The ROD will incorporate terms and conditions from the Incidental Take Statement in the Biological Opinion, if any, and mitigation measures from the FEIS. The process is discussed in Section 5.2, consultation and coordination, of the FEIS.

12-055 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-056 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-057 The requested analysis is provided in Table ES-2.

12-058 Tables 4.17.4 and 4.17.5 detail the ratios and acreages for compensatory mitigation of impacts to biological resources. Acreages are slightly different from the SA/DEIS due to refinements in the GSEP description and impact calculations. Appendix G details the mitigation measures BIO-1 through 29 and mechanisms that would be used to achieve them, including use of the REAT Account.

12-059 Appendix G details the mitigation measures BIO-1 through 29 and mechanisms that would be used to achieve them, including use of the REAT Account.

12-060 Best Management Practices are included in Chapter 2 for the proposed action and alternatives. In addition, sections 4.17 and 4.21 of the FEIS cover 29 mitigation measures for vegetation and wildlife, respectively. Appendix G discusses the mitigation measures in detail. Mitigation measures have been refined since the SA/DEIS.

12-061 The requested analysis is beyond the scope of NEPA. Nonetheless, concerning the alternatives considered and reasons for eliminating some from further consideration, see response to comment 12-006.

12-062 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-062 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-063 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

12-064 The comment provides insufficient information concerning the suggested underestimations in air dispersion modeling for the BLM to provide a more detailed response; nonetheless, see PA/FEIS Section 4.1 concerning the cumulative scenario and Section 4.2, Impacts on Air Resources, concerning the analysis of cumulative impacts on air resources and mitigation measures recommend. There is insufficient basis to require the implementation of the additional mitigation measures proposed; however, the BLM will consider whether to require them as part of the ROD

12-065 A thorough discussion of the methodology used to assess potential cumulative air quality impacts is provided in FEIS Chapter 4.01, Introduction, in Tables 4.01-1 and 4.01-2. The commenter is correct in that these tables do not include every solar project that is currently being proposed. However, the projects listed in these tables represent the projects that BLM considers reasonably foreseeable. Other potential projects were determined by BLM to have a comparatively lower probability of implementation, and therefore were not considered in the cumulative analysis.

In regards to parameters included in the cumulative analysis and the reasoning behind the use of such parameters, the parameters are summarized in Tables 4.01-1 ("Elements to Consider" column), and are discussed in greater detail, including reasoning behind the selection of each parameter, as relevant, in each of the subject area chapters. This level of analysis is consistent with NEPA and BLM/US Department of the Interior standards regarding cumulative analysis. No additional discussion is warranted.

12-066 Please see response to Comment 12-065.

12-067 Please see response to Comment 12-065.

12-068 Please see response to Comment 1-02.

12-069 Please refer to the response to Comment 12-070.

12-070 Substantial additional analysis of potential climate changes impacts has been added to FEIS Chapter 4.03, Global Climate Change. The updated analysis includes discussion of the direct and indirect impacts of the GSEP on climate change, including GHG emissions during construction and operation. This chapter also includes an assessment of the direct and indirect impacts of climate change on the GSEP, including the following specific potential impact categories: sea level rise; snowpack and snowmelt period; dilution; water temperature; flooding, drainage, and erosion; water resources availability; biological resources; fisheries; habitat values of mitigation lands; hazards; wildfire risks; heat waves; changes in soil moisture; and fugitive dust emissions. This chapter assesses the comparative climate change effects for the GSEP and GSEP alternatives, including the Reduced Acreage Alternative, the Dry Cooling Alternative, and three No Action

Alternatives. A review of applicable mitigation measures that would reduce the intensity of potential climate change related impacts is also included. This updated and expanded analysis is consistent with the statutory requirements of NEPA, and is in compliance with Department of Interior requirements for the assessment of climate change for major projects and initiatives, as relevant to the GSEP.

12-071 An assessment of the specific mitigation measures that would be needed to required to protect the Project from the effects of climate change is presented in FEIS Chapter 4.03, Global Climate Change. An assessment and list of specific measures that would reduce adverse air quality effects to minimal levels, or to the maximum extent practicable, is presented in FEIS Chapter 4.2, Impacts on Air Resources. Reviews and lists of specific mitigation measures that would support pollution prevention and environmental stewardship are contained throughout Chapter 4 of the FEIS, including potential impacts to cultural resources, aesthetics, soils resources, water resources, vegetation resources, and several other resource areas. Please refer to these chapters for additional analysis.

12-072 Please refer to response to Comment 12-070.

12-073 A discussion of the potential climate change benefits of the GSEP is contained in Chapter 4.03, Global Climate Change. Please also refer to response to comment 12-070.

12-074 As explained in Section 6.2.1 of the BLM's NEPA Handbook, a carefully crafted purpose and need statement can "increase efficiencies by eliminating unnecessary analysis and reducing delays in the process." The statement of purpose and need dictates the range of alternatives, because action alternatives are not "reasonable" if they do not respond to the purpose and need for the action. As correctly noted in several comments on the GSEP, the narrower the purpose and need statement, the narrower the range of alternatives that must be analyzed; the converse also is true. BLM has discretion in defining the purpose and need of the proposed action (40 CFR 1502.13). Several comments requested that the BLM substantially expand its statement to address more broad (and less specific) purposes in order to allow for consideration of a broader range of alternatives.

As discussed under response to comment 12-007, BLM's purpose and need for the proposed action, as stated in Section 1.1 of the PA/FEIS, is based on two key considerations: (i) the potential action the BLM could or would take on the specific proposed action; and (ii) the response of the BLM in meeting specific directives regarding the implementation of renewable energy projects on federally-managed lands. The primary action that BLM is considering is a response to a specific ROW grant application from the Applicant to construct and operate a specific solar project on a specific site managed by the BLM. As a result, the BLM determined that a key purpose of this project was to determine whether to approve, approve with conditions, or deny that ROW application for the Proposed Action. A statement of this breadth led the BLM to consider two additional "build" or "action" alternatives on the same site, one no action alternative (No Action Alternative A) and two no project alternatives pursuant to which

the CDCA Plan would be amended but the GSEP would not be approved (No Action Alternative B and No Action Alternative C) (see PA/FEIS Chapter 2).

The need for increased energy from renewable sources is not the responsibility of the BLM. However, the BLM can respond, within the context of specific directives under which it operates, to those needs by considering ROW grant applications for projects that would produce renewable energy on federally managed lands. As a result, the BLM purpose for the GSEP responds in part to the specific directives related to renewable energy production that are summarized in PA/FEIS Section 1.1. As noted above, these directives authorize the BLM to act expediently in increasing the production of nonrenewable energy within the bounds of its other authorities regarding the management of federal lands. The BLM is not in the business of developing and operating energy production facilities; its responsibilities are to consider and to approve, approve with modification, or deny issuance of a ROW grant to any qualified individual, business, or government entity and to direct and control the use of rights-of-way on public land in a manner that:

1. Protects the natural resources associated with public lands and adjacent lands, whether private or administered by a government entity.

2. Prevents unnecessary or undue degradation to public lands;

3. Promotes the use of rights-of-way in common considering engineering and technological compatibility, national security, and land use plans; and

4. Coordinate, to the fullest extent possible, all BLM actions under the regulations in this part with state and local governments, interested individuals and appropriate quasi-public entities.

As directed by Secretarial Order 3285, the BLM has identified renewable energy projects on federally managed lands as a priority throughout the lands it manages. As a result, the BLM is considering ROW grants for various renewable energy projects throughout California and other western states. Each of these projects is considered by the BLM on its own merits and with consideration of the impacts of the specific project on a specific site. Therefore, the statement of purpose and need for each project, including the proposed GSEP, is specific to each project within the broader scope of the directives prioritizing renewable energy development on federally managed lands. (The PA/FEIS considers other applications for energy projects in the cumulative impacts analyses provided in PA/FEIS Chapter 4.)

The BLM believes that the purpose and need for the GSEP, as discussed in PA/FEIS Chapter 1, is consistent with the directives described above and the requirements of Title V of FLPMA, and satisfies the requirements of NEPA. Therefore, the purpose and need for this project was neither revised in response to these comments nor replaced wholesale in favor of replacement statements proposed in comments.

12-075 The PA/FEIS provides information about the alternatives considered, including the rational for why alternatives were eliminated from further consideration in Section 2.6. See also, response to comment 12-074, concerning the purpose and need, and response to comment 12-006, concerning alternatives.

12-076 The PA/FEIS provides information about the alternatives considered, including the rationale for why alternatives were eliminated from further consideration in Section 2.6. See also, response to comment 12-074 concerning the purpose and need, and 12-006, concerning alternatives.

12-077 The question requests a description of BLM's authority to adopt a "modified" project design or alternate site on BLM land, to deny an application, or to select another ROW application submitted by the same applicant or its corporate owner. A Right-of-Way (ROW) grant is an authorization to use a specific piece of public land for a certain project, such as a transmission line, road, pipeline, or communication site. A ROW grant authorizes rights and privileges for a specific use of the land for a specific period of time. Generally, a BLM ROW is granted for a term appropriate for the life of the project. As indicated in PA/FEIS Table 1 1, ROWs granted are authorized by Title V of the Federal Land Policy and Management Act (FLPMA) (43 U.S.C. 1761-1771) and the implementing regulations set forth at 43 CFR part 1600. Pursuant to 43USC 1764(j), "The Secretary. . . shall grant, issue, or renew a right-of-way under this subchapter only when he is satisfied that the applicant has the technical and financial capability to construct the project for which the right-of-way is requested, and in accord with the requirements of this subchapter."

BLM's authority includes the power to modify a project design subject to a ROW application, or to deny the application, to the extent that the application does not reflect certain statutorily-required terms and conditions. For example, terms and conditions are imposed to carry out the purposes of FLPMA; minimize damage to scenic and aesthetic values and fish and wildlife habitat, and otherwise protect the environment; require compliance with applicable air and water quality standards; and require compliance with State standards for public health and safety, environmental protection, and siting, construction, operation and maintenance if such standards are more stringent than applicable Federal standards. 43 USC 1765. BLM also may impose terms and conditions to the extent that it deems them necessary to protect Federal property and economic interests; manage efficiently the lands that would be subject to the ROW and protect the other lawful users of the lands adjacent to or traversed by the ROW; protect lives and property; protect the interests of individuals living in the general area traversed by the ROW who rely on the fish, wildlife, and other biotic resources of the area for subsistence purposes; require location of the ROW along a route that will cause least damage to the environment, taking into consideration feasibility and other relevant factors; and otherwise protect the public interest in the lands traversed by the right-of-way or adjacent thereto. 43 USC 1765.

Individual ROW applications are considered separately; thus, two applications submitted by the same applicant or its corporate owner would be considered independently based on the independent merit of each. A decision whether to grant one of the applications would be made independently of whether to grant the other.

12-078 For further rationale for eliminating alternatives from consideration, see PA/FEIS Section 2.6.

12-079 Concerning the purpose and need for the project, see response to comment 12-074.

12-080 The DRECP is a Natural Community Conservation Plan that will help provide for effective protection and conservation of desert ecosystems while allowing for the appropriate development of renewable energy projects. The DRECP will provide long-term endangered species permit assurances, facilitate the California Renewables Portfolio Standard, and provide a process for conservation funding to implement the DRECP. It is anticipated that the DRECP also would serve as the basis for one or more habitat conservation plans (HCPs) under FESA and provide biological information necessary for consultation under FESA Section 7. This Planning Agreement is intended to explain generally the DRECP process and its purpose, and identify the responsibilities of the Parties in the DRECP process. The Parties intend that the DRECP will encompass development of solar, solar PV, wind, and other forms of renewable energy within the Mojave and Colorado Desert regions.

The DRECP is intended to advance federal and state conservation goals in the California desert region while facilitating the timely permitting of renewable energy projects under applicable federal and state laws. The federal government, State of California and others are committed to developing compatible renewable energy generation facilities and related transmission infrastructure to achieve requirements and goals established in the federal Energy Security Policy Act of 2005, the American Recovery and Reinvestment Act of 2009, the State Renewables Portfolio Standard (Pub. Util. Code Section 399.11, et seq.), and Executive Order S-14-08. They are equally committed to conserving biological and natural resources, including the desert regions of California, which support extraordinary biological and other natural resources of great value, including numerous threatened and endangered plant and animal species.

A joint Federal and State Renewable Energy Action Team (REAT) was established in 2008 by Executive Order S-14-08 and associated Memoranda of Understanding by and among several federal and state agencies. BLM is a voluntary participant in the REAT. See Secretary of the Interior's Secretarial Order 3285 (March 2009), which directs all Department of the Interior agencies (including the BLM) to encourage the timely and responsible development of renewable energy, while protecting and enhancing the nation's water, wildlife, and other natural resources. Other REAT members include representatives of the Fish and Wildlife Service, California Department of Fish and Game and the California Energy Commission. The REAT's primary mission is to streamline and expedite the permitting processes for renewable energy projects, while conserving

endangered species and natural communities at the ecosystem scale. Executive Order S-14-08 directs the REAT to achieve these twin goals in the Mojave and Colorado Desert regions through the DRECP.

On May 19, 2010, the REAT announced the signing of an agreement to enable renewable energy projects proposed in the California Desert to address mitigation requirements through the use of a deposit account rather than having to individually undertake mitigation for each project. The necessary amount of funds to mitigate a project's impacts to wildlife and habitat will be determined on a project by project basis. It is expected that this process will expedite projects and ensure that a wider range of mitigation measures are available to address environmental impacts. This newly-established deposit account is one tool among several that renewable energy project proponents can use to mitigate impacts. The availability of this mechanism to address impacts in no way restricts the availability of other possible avenues to mitigate impacts. The Energy Commission's conditions of certification (PA/FEIS Appendix G) identify the deposit account as one possible avenue; other avenues remain available.

Solar PEIS

The BLM will not consider the proposed GSEP within the draft framework of the Solar PEIS. Although the BLM generally prefers to develop programmatic NEPA documentation and, thereafter, to use it as a basis for site-specific projects, the process of drafting, reviewing and considering the Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development (Solar PEIS) is not yet final.

In response to direction from Congress under Title II, Section 211 of the Energy Policy Act of 2005, as well as Executive Order 13212, Actions to Expedite Energy-Related Projects, the BLM and the DOE are collaborating to prepare the Solar PEIS pursuant to NEPA and CEQ regulations. The Solar PEIS will evaluate utility-scale solar energy development in a six-state area, including that portion of the CDCA that is open to solar energy development in accordance with the provisions of the CDCA Plan. The planning area will not include lands within the CDCA that have special designations, such as National Monuments, Wilderness Areas, Wilderness Study Areas, Wild and Scenic Rivers, National Historic and Scenic Trails, Areas of Critical Environmental Concern, or other special management areas that are inappropriate for or inconsistent with extensive, surface-disturbing uses. The planning area for the Solar PEIS also will not include lands within the National Landscape Conservation System.

A Notice of Intent to Prepare the Solar PEIS was published in the Federal Register on May 29, 2008. Secretarial Order No. 3285, issued March 11, 2009 by the Secretary of the Interior, announced a policy goal of identifying and prioritizing specific locations best-suited for large-scale production of solar energy. In light of this Order, the BLM and the DOE agreed to postpone completion of the Draft Solar PEIS, and, on June 30, 2009, published a Notice of Availability of maps that preliminarily identify 24 tracts of BLM-administered land for in-depth study. The scoping period was extended. The schedule to

complete the Draft Solar PEIS remains "to be determined." (Solar PEIS, 2010). The schedule to complete the Final Solar PEIS or adopt the ROD also is not yet known (Id.).

Because the Solar PEIS is under development, it, and any decisions the BLM's makes based on its analysis, will not govern BLM's decision-making efforts for the GSEP. The BLM has a responsibility to perform a timely environmental review in response to individual applications. For this reason, the BLM will consider the proposed GSEP pursuant to FLPMA, NEPA, and applicable planning documents, in accordance with the BLM's existing Solar Energy Development Policy.

12-081 The purpose and need are addressed in PA/FEIS Sections 1.1.1 (BLM's Purpose and Need) and 1.1.2 (DOE's Purpose and Need), and in response to comment 12-074.

12-082 Concerning the joint Department of Energy (DOE)/BLM Programmatic Solar DEIS and the Desert Renewable Energy Conservation Plan, see response to comment 12-081.

12-083 The information requested in this comment is beyond the scope of the PA/FEIS.

12-084 The comment recommends that renewable energy projects be sited on previously disturbed or contaminated lands, e.g., pursuant to the Environmental Protection Agency's RE-Powering America's Land program, which has identified a number of contaminated lands and abandoned mine sites nationwide with potential for renewable energy development. While several of these sites are on BLM-managed land in California, none comes close to the acreage necessary for a utility-scale solar facility of the proposed project's size. Applicants are responsible for identifying possible sites for proposed projects. The Applicant for the GSEP project did not propose its development on a disturbed, degraded or contaminated site. The BLM is responsible for identifying possible project alternatives, potentially including alternative locations, and did so here (see, FEIS Chapter 2). Suggestions about prospective siting decisions that do not pertain to the decisions, methodology, or analysis in the FEIS; and that do not recommend or cause changes or revisions in one or more of the alternatives considered do not raise a NEPA issue. See, BLM NEPA Handbook H-1790-1 (Jan. 30, 2008) § 6.9.2.1, Substantive Comments.

Concerning the recommendation that the BLM consider each proposed renewable energy project in comparison with others proposed in the Desert Southwest region, the BLM refers the commenter to Chapter 4, in which the direct, indirect and cumulative impacts of the GSEP and alternatives are discussed. See, e.g., FEIS Section 4.02 (Air Resources), FEIS Section 4.19 (Water Resources), FEIS Section 4.17(Vegetation), FEIS Section 4.21 (Wildlife Resources), FEIS Section 4.18 (Visual Resources), and FEIS Section 4.04 (Cultural Resources).

12-085 Concerning the siting of renewable energy projects on previously disturbed or contaminated lands, see Response to Comment 12-084. Concerning siting decisions, the BLM's role in managing public lands includes facilitating land uses on lands under the

BLM's jurisdiction while appropriately balancing and responding to multiple interests concerning federal mandates, collaborating agencies' directives, and BLM's own interests. As a result, the sites considered in the SA/DEIS and the FEIS focus on actions by the BLM that would respond to the specific application for a ROW grant received by the BLM for the GSEP project. The location of a project is determined by the applicant and must meet a number of requirements in order to be considered a viable location. BLM's role is to ensure that each proposal is reviewed with the utmost scrutiny. Accordingly, since renewable power generation facilities were expected in the California Desert, the CDCA plan made allowances for the review of such applications and in fact created a provision that all proposed applications, "…associated with power generation or transmission not identified in the Plan (CDCA) will be considered through the Plan Amendment process." The intention of this provision was to ensure that the BLM would take a planning view of all of the renewable energy applications proposed and that such projects would require an amendment to the CDCA Plan to maintain consistency throughout the planning area. Here, the Applicant's proposal to construct, operate, and ultimately to decommission, the GSEP on the proposed site is evaluated, and alternatives proposed, consistent with the BLM's role in managing the public lands subject to its authority.

12-086 Concerning the adequacy of the range of alternatives considered, see response to comment 12-006. The rationale for eliminating the Gabrych Alternative and a "Resource Avoidance" alternative is provided in PA/FEIS Section 2.6.

12-087 NEPA does not require the completion of a quantified lifecycle analysis in order to evaluate relative impacts and, because no such analysis was provided for this project, Chapter 4 has not been revised to include one.

12-088 Concerning the Desert Renewable Energy Conservation Plan, see response to comment 12-080).

12-089 The BLM has been consulting with Indian tribes since the early stages of project planning and will continue this consultation throughout the Section 106 compliance process. BLM's tribal consultation efforts are discussed on pages 3.4-32 through 3.4-34 and in Appendix D, Cultural Resources Tables 3 and 4. Tribes have been invited to identify properties of traditional cultural and religious importance that might be affected by the project. Tribes have also been invited to participate in consultations to develop a Programmatic Agreement for the project that will seek to resolve adverse effects on any properties of traditional cultural and religious importance that may be identified. Development of the Programmatic Agreement, with tribal participation, is ongoing. The Programmatic Agreement will be completed and signed prior to approval of the ROD.

12-090 Impacts on cultural resources are analyzed in PA/FEIS Section 4.4. As indicated in PA/FEIS Section 3.4, 4.4 and Appendix D, the BLM recognizes the distinction between Executive Order 13007 and NHPA Section 106.

12-091 The requested analysis is included in PA/FEIS Sections 3.14 and 4.13. Cumulative impacts on biological and other environmental resources are analyzed on an issue-by-issue basis throughout Chapter 4.

5.4.3.13 Letter 13 – Responses to Comments from Tom Budlong

13-001 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

13-002 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

13-003 There is no requirement in NEPA to mitigate all impacts below a threshold as required under CEQA.

13-004 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

13-005 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

13-006 According to Section 6.2 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), the purpose and need statement for an externally generated action must describe the BLM purpose and need, not an applicant's or external proponent's purpose and need. The applicant's purpose and need may provide useful background information, but this description must not be confused with the BLM purpose and need for action. The BLM action triggers the NEPA analysis.

13-007 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

13-008 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. With regard to the commenter's statement concerning immitigable significant impacts, there is no requirement in NEPA to mitigate all impacts below a threshold as required under CEQA.

13-009 As explained in Section 6.2.1 of the BLM's NEPA Handbook, the statement of purpose and need dictates the range of alternatives analyzed, because action alternatives are not "reasonable" if they do not respond to the purpose and need for the action. The narrower the purpose and need statement, the narrower the range of alternatives that must be analyzed; the converse also is true. BLM has discretion in defining the purpose and need of the proposed action (40 CFR 1502.13).

BLM's purpose and need for the proposed action, as stated in Section 1.1 of the PA/FEIS, is based on two key considerations: (i) the potential action the BLM could or would take on the specific proposed action; and (ii) the response of the BLM in meeting specific

directives regarding the implementation of renewable energy projects on federally-managed lands. The primary action that BLM is considering is a response to a specific ROW grant application from the Applicant to construct and operate a specific solar project on a specific site managed by the BLM. As a result, the BLM determined that a key purpose of this project was to determine whether to approve, approve with conditions, or deny that ROW application for a parabolic trough solar thermal electric generating facility, i.e., the GSEP.

13-010 See Response to Comment 13-009.

13-011 See Response to Comment 13-009.

13-012 See Response to Comment 13-009.

13-013 The Applicant has applied to the Department of Energy (DOE) for a loan guarantee under Title XVII of the Energy Policy Act of 2005 (EPAct 05), as amended by Section 406 of the American Recovery and Reinvestment Act of 2009, P.L. 111-5 (the "Recovery Act"). The purpose and need for action by DOE is to comply with its mandate under EPAct by selecting eligible projects that meet the goals of the Act.

EPAct 05 established a Federal loan guarantee program for eligible energy projects, and was amended by the Recovery Act to create Section 1705 authorizing a new program for rapid deployment of renewable energy projects and related manufacturing facilities, electric power transmission projects, and leading edge biofuels projects.

13-014 The BLM does not require the preparation of a cost benefit analysis or a fiscal impact statement. These are more typically done by the applicants prior to considering the use of public lands for projects. Additionally, reviewing such information would not affect the size and scope of the project, or its impacts, nor would it improve the analysis of the alternatives in such a manner as to make one more feasible than another. Prior to initiating the NEPA environmental review process, the BLM required the applicant provide a power purchase agreement to ensure that the proposed action would be economically viable. The GSEP has received approval for a 25-year power purchase agreement with PG&E. Additionally, reclamation bonds will be required for the removal of the project facilities and rehabilitation and revegetation of the environment.

13-015 See Response to Comment 13-014.

13-016 This comment suggests that the energy delivered to the customer, after it has gone through the transmission lines should be analyzed. However, this is not a substantive comment based on the guidance provided in Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008) because the comment does not pertain to the area of the proposed action or the proposed action itself. The energy required for proposed operations and construction including fuel combustion associated with equipment and worker trips has been quantified and is analyzed with regard to impacts to climate change (See PA/FEIS section 4.03, Impacts to Climate Change). See also Response to Comment 13-014.

13-017 See Response to Comment 13-014.

13-018 The proposed MW capacity refers to the maximum amount of power that can be generated at the proposed facility. The project description is correct in that the GSEP would have a capacity of 250 MW, that is, if the GSEP is operating at 100 percent efficiency, it would be capable of generating 250 MW. The capacity of parabolic through solar energy projects affects the amount of acreage required for the installation of the solar troughs. The more MWs produced the more acreage required. Thus, the proposed 250 MW capacity explains why the proposed area of disturbance totals roughly 1,800 acres. The fact that the GSEP would operate at an efficiency lower than 100 percent is expected and does not affect the environmental analysis presented in this FEIS. From an economic standpoint, the applicant would receive revenue based on the amount of power sold. However, the BLM does not require the preparation of a cost benefit analysis or a fiscal impact statement, and therefore no such analysis is presented in this FEIS.

13-019 See Response to Comment 13-018.

13-020 The environmental consequences of the proposed action are discussed in PA/FEIS Chapter 4. CEQA requirements, including a determination of impact significance, are not applicable in the NEPA context.

13-021 This comment suggests that the Conditions of Certification uses subjective terminology. However, pursuant to 40 CFR 1505.2(c), a monitoring and enforcement program shall be adopted and implemented to ensure compliance with NEPA decisions. Therefore, the BLM will ensure that the mitigation is carried out as described in the decision document. With regard to comments made concerning impact significance, CEQA requirements, including a determination of impact significance, are not applicable in the NEPA context.

13-022 See Response to Comment 13-021.

13-023 See Response to Comment 13-021.

13-024 See Response to Comment 13-021.

13-025 See Response to Comment 13-021.

13-026 CEQ regulations demand information of ‘‘high quality’’ and professional integrity (40 CFR 1500.1, 1502.24). The use of “available data” does not indicate the analysis has relied on incomplete data. NEPA itself does not require the use of ‘‘best available data.’’ However, the BLM’s obligations under other authorities, such as the Information Quality Act Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554), do require bureaus to use the best available data. There is, however, no official definition of best available data; this is principally a byproduct of experience. This does not imply, however, that there may not be a better way of acquiring or analyzing necessary information, but through years of experience, EIS preparers and the BLM have become familiar with certain data sets and have grown accustomed to their

application for various assessments. With regard to the commenter's implication that the terminology used is too subjective, see Response to Comment 13-021.

13-027 See Response to Comments 13-021 and 13-026.

13-028 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

13-029 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-006.

13-030 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-006.

13-031 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-009.

13-032 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-009.

13-033 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-009.

13-034 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-009.

13-035 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-009.

13-036 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. CEQA requirements, including a determination of impact significance, are not applicable in the NEPA context. BLM does not require the preparation of a cost benefit analysis or a fiscal impact statement, and therefore no such analysis is presented in this FEIS. Also see Response to Comment 13-009.

13-037 See Response to Comment 13-009.

13-038 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

13-039 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-009.

13-040 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-009.

13-041 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-009.

13-042 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-009.

13-043 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-009.

13-044 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-009.

13-045 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-009.

13-046 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-009.

13-047 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Also see Response to Comment 13-009.

5.4.3.14 Letter 14 – Responses to Comments from Galati-Blek, LLP, for Genesis Solar

14-001 Tank you for your input. BLM has considered the testimony in preparing this PA/FEIS.

14-002 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

14-003 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

14-004 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

14-005 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

14-006 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

14-007 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

14-008 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

14-009 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

14-010 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

14-011 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

14-012 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.

5.5 Administrative Remedies

BLM and EPA's Office of Federal Activities will publish separate NOAs for the PA/FEIS in the *Federal Register* when the document is ready to be released to the public. The NOA (to be published by the EPA in the *Federal Register*) will initiate a 30-day protest period on the Proposed PA to the Director of the BLM in accordance with 43 CFR 1610.5-2. Additionally, the BLM will be accepting additional public comment during this period. All substantive comments will be reviewed and responded to in the Record of Decision.

Following resolution of any protests, BLM may publish an Approved Plan Amendment and a Record of Decision (ROD) on the Project Application. Publication and release of the ROD would serve as public notice of BLM's decision on the Project Application which is appealable in accordance with 43 CFR Part 4.

5.6 List of Preparers

Though individuals have primary responsibility for preparing sections of the Proposed PA/FEIS, the document is an interdisciplinary team effort. In addition, internal review of the document occurs throughout preparation. Specialists at the BLM's Field Office, State Office, and Washington Office review the analysis and supply information, as well as provide document preparation oversight. Contributions by individual preparers may be subject to revision by other BLM specialists and by management during internal review.

TABLE 5-2
LIST OF PREPARERS

Name	Job Title	Primary Responsibility
BLM – Palm Spring-South Coast Field Office		
Cook, Stewart	GIS Specialist	Mapping
Hill, Greg	NEPA Coordinator	OHV/Recreation/VRM
Kline, George	Archaeologist	Cultural and Paleontological Resources
Maser, Mark	Biologist	Wildlife and Vegetation
Roberts, Holly	Associate Field Manager	Land Use Planning and NEPA Compliance
Shaffer, Allison	Realty Specialist	Lands and Transmission
BLM – California Desert District Office		
Childers, Jeff	Planning and Environmental Coordinator	Land Use Planning and NEPA Compliance
Godfrey, Peter	Hydrologist	Water Resources
LaPre, Larry	District Wildlife Biologist	Wildlife and Vegetation
Ludwig, Noel	Hydrologist	Water Resources
Marsden	Wildlife Biologist	Wildlife and Vegetation
Queen, Rolla	District Archaeologist	Cultural Resources
Roholt, Chris	Wilderness/NLCS Coordinator	Wilderness; Special Designations
Stein, Alan	Deputy District Manager, Resources	Planning; Review
BLM – California State Office		
Brink, Dianna	Rangeland Management Specialist	Rangeland, Grazing, Invasive Species/Weeds
Conley, Mark	Wilderness Coordinator	Special Land Use Designations, NLCS
Conrad-Saydah, Ashley	Renewable Energy Program Manager	Climate Change, Environmental Justice, (transmission)
Dreyfuss, Erin	Planning and Environmental Coordinator	Planning, NEPA Compliance
Fesnock, Amy	State Wildlife and Threatened and Endangered Species Lead	Wildlife, Special Status Species, Biology
Hunter, Charlotte	State Archeologist	Cultural and Paleontological Resources
Keeler, Jim	Off-highway vehicle coordinator	Recreation
Lund, Christina	State Botanist	Botany
McGinnis, Sandra	Planning and Environmental Coordinator	Planning, NEPA Compliance
Quinn, Sarah	Renewable Energy Program and Environmental Coordinator	Consistency Review, NEPA Compliance
Sintetos, Mike	Project Manager	Public Comment Review; Consistency Review
Wick, Bob	Natural Resource Specialist - Wilderness	Wilderness Characteristics Inventory
Environmental Science Associates		
Bautista, Lisa	Document Manager	Word Processing
Carlson, Nik	Senior Technical Associate	Environmental Justice, Social and Economics
Cordery, Ted	Biologist	Vegetation and Wildlife Resources, Wildland and Fire Ecology
Duverge, Dylan	Associate	Visual Resources
Eckard, Robert	Senior Associate	Global Climate Change, Water Resources
Holst, Julie	Associate	References
Hooper, Ron	Hydrologist	Livestock and Grazing, Water Resources, Wild Horse and Burro, Air Quality, Noise

TABLE 5-2 (Continued)
LIST OF PREPARERS

Name	Job Title	Primary Responsibility
Environmental Science Associates (cont.)		
Kershaw, Byard	Hazardous Materials Specialist	Mineral Resources, Public Health and Safety
Kershaw, Carol	Lands and Realty Specialist	Lands and Realty
McCullough, Wes	GIS Analyst	Figures
Nielsen, Jason	Graphic Artist	Figures
Noddings, Chris	Associate	Figures, Appendices, References
Piraino, Cristina	Senior Associate	Recreation, Special Designations, Transportation and Public Access – OHV, and Consultation, Coordination and Public Involvement
Prohaska, Robert	Energy Group Director	Purpose and Need, Proposed Action and Alternatives, Public Health and Safety
Scott, Janna	Managing Associate	Cumulative Projects, Consultation, Coordination and Public Involvement
Simmons, Gregg	NEPA Compliance Specialist	Proposed Action and Alternatives, Cumulative Projects, Multiple Use Classes, Special Designations, Consultation, Coordination and Public Involvement
Stumpf, Gary	Cultural Resources Specialist	Cultural and Paleontological Resources
Teitel, Ron	Senior Graphic Artist	Figures

ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
°F	degrees Fahrenheit
A	ampere (amp)
AAQS	ambient air quality standards
AB	Assembly Bill
AB 32	California Global Warming Solutions Act of 2006
ac	acres
ACC	air-cooled condenser
ACEC	Area of Critical Environmental Concern
ACHP	Advisory Council on Historic Preservation
ADT	Average Daily Traffic
AERMOD	AMS/EPA Regulatory Model
af or ac-ft	acre-feet
AFC	Application for Certification
afy or ac-ft/yr	acre-feet per year
AIChE	American Institute of Chemical Engineers
AIM	Aeronautical Information Manual
ALUC	Airport Land Use Commission
AM	Amplitude Modulated
AML	appropriate management level
AML	abandoned mined lands
AMPs	Allotment Management Plans
AMS	American Meteorological Society
amsl	above mean sea level
AMT	alternative minimum tax
ANSI	American National Standards Institute
AO	Authorized Officer
APCDs	Air Pollution Control Districts
APCO	Air Pollution Control Officer
APE	Area of Potential Effects
API	American Petroleum Institute
APLIC	Avian Power Line Interaction Committee

APN	Assessor's Parcel Number
APP	Avian Protection Plan
Applicant	Palo Verde Solar I
AQCMM	Air Quality Construction Mitigation Manager
AQCMP	Air Quality Construction Mitigation Plan
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
ARPA	Archaeological Resources Protection Act of 1979
ASME	American Society for Material Engineering
AST	aboveground storage tank
ASTM	American Society for Testing Materials Standards
ATC	Authority to Construct
ATCC	Area of Traditional Cultural Concern
ATCM	Airborne Toxic Control Measure
ATV	all-terrain vehicle
AWEA	American Wind Energy Association
BA	Biological Assessment
BAAB	Blythe Army Air Base
BAAQMD	Bay Area Air Quality Management District
BACM	Best Available Control Measures
BACT	Best Available Control Technology
BCC	birds or conservation concern
bgs	below ground surface
bhp	brake-horsepower
BIL	basic impulse level
BIS	Department of Business Innovation & Skills
BLM	United States Bureau of Land Management
BMPs	best management practices
BO	Biological Opinion
BOR	Bureau of Reclamation
BRMIMP	Biological Resources Mitigation Implementation and Monitoring Plan
BSPP	Blythe Solar Power Plant
CAA	Clean Air Act
CAISO	California Independent System Operator
CAL FIRE	California Department of Forestry and Fire Protection
CalARP	California Accidental Release Program
CalEPA	California Environmental Protection Agency
Cal-IPC	California Invasive Plant Council
Cal-OSHA	California - Occupational Safety and Health Administration

CalPIF	California Partners in Flight
Caltrans	California State Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CAS	Chemical Abstracts Service
CATEF II	California Air Toxics Emission Factors
CBC	California Building Code
CBEA	California Biomass Energy Alliance
CBO	Conference of Building Officials
CBOC	California Burrowing Owl Consortium
CBSC	California Building Standards Code
CC	City Council
CCAA	California Clean Air Act
CCR	California Code of Regulations
CCS	cryptocrystalline silicate
CCTV	closed circuit television
CDCA	California Desert Conservation Area
CDCA Plan	California Desert Conservation Area Plan
CDD	California Desert District
CDE	California Department of Education
CDF	California Department of Forestry and Fire Protection
CDFA	California Department of Food and Agriculture
CDFG	California Department of Fish and Game
CDMG	California Division of Mines and Geology
CDPA	California Desert Protection Act of 1994
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFATS	Chemical Facility Anti-Terrorism Standard
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
CH_4	methane
Chamber of Commerce	Blythe Area Chamber of Commerce
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CIWMA	California Integrated Waste Management Act of 1989
CIWMB	California Integrated Waste Management Board
CMUP	Comprehensive Management and Use Plan

CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNF	Cleveland National Forest
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
COC	Conditions of Certification
col	colonies
CPM	Compliance Project Manager
CPUC	California Public Utilities Commission
CRAM	California Rapid Assessment Method
CRBRWQCB	Colorado River Basin Regional Water Quality Control Board
CRHR	California Register of Historical Resources
CRS	Congressional Research Service
CSC	California Species of Special Concern
CSP	California State Parks
CTG	Combustion Turbine Generator
CTI	Cooling Technology Institute
CTTM	Comprehensive Travel and Transportation Management
CUPA	Certified Unified Program Authority
CURE	California Unions for Reliable Energy
CVBG	Chuckwalla Valley Groundwater Basin
CWA	Clean Water Act
cy	cubic yards
D	dynamic volt amp reactive
D	Delisted
dB	Decibel
dBA	A-weighted decibels
DCS	data (or distributed) control system
DDT	Dichloro-diphenyl-trichloroethane
DESCP	Drainage, Erosion, and Sedimentation Control Plan
DHS	Department of Homeland Security
DMG	Division of Mines and Geology (now called California Geological Survey)
DNA	Determination of NEPA Adequacy
DOC	California Department of Conservation
DOE	United States Department of Energy
DOI	United States Department of Interior
DOJ	United States Department of Justice
DOT	Department of Transportation

DPM	diesel particulate matter
DPR	Department of Parks and Recreation
DPR	Department of Pesticide Regulation
DPS	Distinct Population Segment
DPV1	Devers-Palo Verde No. 1 Transmission Line
DPV2	Devers-Palos Verde 2 Transmission Line
DRECP	California Desert Renewable Energy Conservation Plan
DRMP-A/DEIS	Draft Resource Management Plan-Amendment/Draft Environmental Impact Statement
DTC	Desert Training Center
DTC/C-AMA	George S. Patton's World War II Desert Training Center/California-Arizona Maneuver Area
DTCCL	Desert Training Center California-Arizona Area Cultural Landscape
DTRO	Desert Tortoise Recovery Office
DTSC	Department of Toxic Substances Control
DWMA	Desert Wildlife Management Area
DWR	California Department of Water Resources
E3	Energy and Environmental Economics, Inc.
EA/FONSI	Environmental Assessment/Finding of No Significant Impact
EB	eastbound
EEC	Eastshore Energy Center
EEMP	Equipment Emissions Mitigation Plan
EERE	Energy Efficiency and Renewable Energy
EFD	El Centro Fire Department
EFZ	Earthquake Fault Zone
EIC	Eastern Information Center
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMF	Electric and Magnetic Field
EMS	Emergency Medical Services
EO	Executive Order
EPA	United States Environmental Protection Agency
EPAct 05	Energy Policy Act of 2005
EPRI	Electric Power Research Institute
EPS	Emission Performance Standard
ERC	Emission Reduction Credit
ESA	Endangered Species Act
ET	evapotranspiration
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FDOC	Final Determination of Compliance

FE	Federally listed as endangered
FEIR	Final Environmental Impact Report
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FESA	Federal Endangered Species Act
FHWA or FHA	Federal Highway Administration
FLPMA	Federal Land Policy and Management Act
FM	Frequency Modulated
FMAP	Fire Management Activity Plan
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
fps	feet per second
FR	Federal Register
FSC	Field Supervisor Controller
ft	feet
ft^2/d	feet squared per day
FT	Federally listed as threatened
FTA	Federal Transit Administration
FTE	full time equivalent
FTHL	flat-tailed horned lizard
g	gravity
gal	gallon
GCC	Global Climate Change
GEA	Geothermal Energy Association
gen-tie	power transmission line
GHG	greenhouse gas
GIS	geographic information system
gpd	gallons per day
gpd/ft	gallons per day per foot
gpd/ft^2	gallons per day per square foot
gpm	gallons per minute
GSEP	Genesis Solar Energy Project
GSU	generator set-up transformer
GWh	gigawatt-hour
GWR	groundwater recharge
H_2S	hydrogen sulfide
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscape Survey

HAP	Hazardous Air Pollutant
HARP	Hotspots Analysis Reporting Program
HAs	Herd Areas
HCE	heat collection element
HCM	Highway Capacity Manual
HDPE	high-density polyethylene
HEC-RAS	Hydrologic Engineering Center River Analysis System
HERO	high efficiency reverse osmosis
HFCs	hydrofluorocarbons
HI	Hazards Index or Chronic Hazards Index
HMAs	Herd Management Areas
HMBP	Hazardous Materials Business Plan
hp	horsepower
HP	high pressure
HPTP	Historic Properties Treatment Plan
HRA	Health Risk Assessment
HRP	Habitat Restoration Plan
HSC	Health and Safety Code
HTF	Heat Transfer Fluid
HUC	hydrologic unit code
HWSRMRA	Hazardous Waste Source Reduction and Management Review Act of 1989
Hz	Hertz
I-10	Interstate-10
ICAPCD	Imperial County Air Pollution Control District
ICC	Interagency Coordinating Committee
ICDTSC	Imperial County Department of Toxic Substances Control
IEEE	Institute of Electrical and Electronics Engineers
IEPR	Integrated Energy Policy Report
IID	Imperial Irrigation District
ILPP	Injury and Illness Prevention Program
in	inches
in/sec	inches per second
IND	Industrial Service Supply
INT	international
IP	intermediate pressure
ISCST	Industrial Source Complex Short Term
ISO	Independent System Operator
ITC	investment tax credit
IUSD	Imperial Unified School District
IVEDC	Imperial Valley Economic Development Corporation

IVRM	Interim Visual Resource Management
IVS	Imperial Valley Solar
K	erosion factor
kA	kilo-amps
KOPs	key observation points
kV	kilovolt
kVA	kilovolt-amperes
kVAR	kilovolt-ampere reactive
kW	kilowatt
kWe	kilowatt-electric
L_{90}	The A-weighted noise level that is exceeded 90 percent of the time during the measurement period.
LADWP	Los Angeles Department of Water and Power
lbs	pounds
lb/yr	pounds per year
L_{dn}	day-night average noise level
LDS	leachate detection system
LE	Land Evaluation
LEDPA	Least Environmentally Damaging Practicable Alternative
L_{eq}	equivalent continuous sound level
LESA	Land Evaluation and Site Assessment
LESA Model	Land Evaluation and Site Assessment Model
LID	Low Impact Development
LLC	Limited Liability Corporation
LORS	laws, ordinances, regulations, and standards
LOS	level of service
LP	low pressure
LRAs	Local Reliability Areas
LTU	Land Treatment Unit
LTVA	Long-Term Visitor Area
LUP	Land Use Plan
M6.0	earthquake of magnitude 6.0 or greater
Ma	million years ago
MA	management area
MACT	Maximum Available Control Technology
MBTA	Migratory Bird Treaty Act
MCE	Maximum Credible Earthquake
MCL	Maximum Contaminant Level
MCR	Monthly Compliance Report
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District

MEIR	maximum exposed individual resident
MEIW	maximum exposed individual worker
mg/L	milligrams per liter
mg/m^3	milligrams per cubic meter
mi	miles
ml	milliliters
ML	Measuring Location
mm	millimeters
MM	Modified Mercalli
MMBtu	1 million british thermal units
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
mph	miles per hour
MPP	Mirror Positioning Plan
MRZ	Mineral Resource Zone
MSA	Metropolitan Statistical Area
msl	mean sea level
MT	metric ton
MTBF	mean time between failure
$MTCO_2e$	metric tons of carbon dioxide equivalent
MTPs	Master Title Plats
MTS	Metropolitan Transit System
MUC	Multiple-Use Class
MUC C	Multiple-Use Class Controlled
MUC I	Multiple-Use Class Intensive
MUC L	Multiple-Use Class Limited
MUC M	Multiple-Use Class Moderate
MUC U	Multiple-Use Class Unclassified
MUN	Municipal and Domestic Water Supply
MVA	megavolt-amperes
MVAR	megavolt-ampere reactive
MW	megawatts
Mw	Maximum Earthquake Magnitude
MWh	megawatt-hour
N/A	Not Applicable
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NECO	Northern and Eastern Colorado Desert Coordinated Management Plan

NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NESC	National Electrical Safety Code
NFP	National Fire Plan
NFPA	National Fire Protection Association
NFWF	National Fish and Wildlife Foundation
NHPA	National Historic Preservation Act
NIOSH	National Institute of Safety and Health
NLCS	National Landscape Conservation System
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NRHP or National Register	National Register of Historic Places
NO	nitric oxide
NO_2	nitrogen dioxide
NOA	Notice of Availability
NOI	Notice of Intent
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	United States National Park Service
NRC	National Research Council
NRCS	Natural Resources Conservation Service
NRDC	Natural Resources Defense Council
NSPS	New Source Performance Standard
NSR	New Source Review
NTP	Notice to Proceed
NWIS	National Water Information System
O&M	operations and maintenance
O_2	oxygen
O_3	ozone
OCA	Off-site Consequence Analysis
OCWGB	Ocotillo/Coyote Wells Groundwater Basin
OEHHA	Office of Environmental Health Hazard Assessment
OFA	Offer of Financial Assistance
OHV	off-highway vehicle
OII	Order Initiating an Informational
OLM	Ozone Limiting Method
OSHA	United States Occupational Safety and Health Administration
OTC	once-through cooling
PA	Programmatic Agreement
PA	Plan Amendment

PA/FEIS	Resource Management Plan-Amendment/Final Environmental Impact Statement
PSSCFO	Palm Springs / South Coast Field Office
PALS	pre-acquisition liability survey
PBS	Peninsular bighorn sheep
PCA	Pest Control Advisor
PCU	power conversion unit
PDF	Portable Document Format
PDOC	Preliminary Determination of Compliance
PEIS	Programmatic Environmental Impact Statement
PFCs	perfluorocarbons
PGA	peak ground acceleration
PG&E	Pacific Gas and Electric Company
PL	Public Law
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PMI	Point of Maximum Impact
POD	Plan of Development
PPA	Power Purchase Agreement
PPE	Personal Protective Equipment
ppm	parts per million
ppmv	parts per million by volume
ppmvd	parts per million by volume, dry
PQAD	Prehistoric Quarries Archaelogical District
PRC	Public Resources Code
PRIA	Public Rangelands Improvement Act of 1978
PRM	Paleontological Resource Monitors
PRMMP	Paleontological Resources Monitoring and Mitigation Plan
PRPA	Paleontologic Resources Preservation Act
PRS	Paleontological Resources Supervisor
PSA	Preliminary Staff Assessment
PSD	Prevention of Significant Deterioration
psi	pounds per square inch
PSSCFO	Palm Springs South Coast Field Office
PTNCL	Prehistoric Trails Network Cultural Landscape
PTO	Permit to Operate
PTZ	pan, tilt, and zoom
PV	photovoltaic
PVC	polyvinyl chloride
PVID	Palo Verde Irrigation District

PVMGB	Palo Verde Mesa Groundwater Basin
PVVGB	Palo Verde Valley Groundwater Basin
PVVTA	Palo Verde Valley Transit Agency
PYFC	Potential Fossil Yield Classification
QFER	Quarterly Fuel and Energy Report
R	Rare
RACM	Reasonably Available Control Measures
RACT	Reasonably Available Control Technology
RCALUC	Riverside County Airport Land Use Commission
RCFD	Riverside County Fire Department
RCRA	Resource Conservation and Recovery Act
REAT	Renewable Energy Action Team
REC I	Water Contact Recreation
REC II	Non-contact Water Recreation
Recovery Act	American Recovery and Reinvestment Act of 2009, P.L. 111-5
RECs	Recognized Environmental Conditions
REF	Renewable Electricity Future
RELs	Reference Exposure Levels
RETI	Renewable Energy Transmission Initiative
RFI	radio frequency interference
RMP	Resource Management Plan
RMPA	Resource Management Plan Amendment
RO	reverse osmosis
ROD	Record of Decision
ROG	reactive organic gases
ROW	right-of-way
ROWD	Report of Waste Discharge
RPS	Renewables Portfolio Standard
RQ	reportable quantity
RSA	Revised Staff Assessment
RTP	Regional Transportation Plan
RUSLE2	Revised Universal Soil Loss Equation
RV	recreational vehicle
RWQCB	Regional Water Quality Control Board
S	Sensitive
SAC	Science Advisory Committee
SA/DEIS	Staff Assessment/Draft Environmental Impact Statement
SAP	Sampling and Analysis Plan
SARA Title III	Superfund Amendments and Reauthorization Act of 1986
SC	sediment control

SCA	Solar Collector Assembly
SCADA	supervisory control and data acquisition
SCAG	Southern California Association of Governments
SCCWRP	Southern California Coastal Water Research Project
SCE	Southern California Edison
SCEC	Southern California Earthquake Center
scf	standard cubic feet
scfh	standard cubic feet of hydrogen per hour
SCG	Southern California Gas Company
SCPBRG	Santa Cruz Predatory Bird Research Group
SCWD	Seeley County Water District
SDAR	San Diego and Arizona Railroad
SDG&E	San Diego Gas and Electric Company
SE	State listed as endangered
SES	Stirling Energy Systems
SESA	Solar Energy Study Area
sf	square feet
SF_6	sulfur hexafluoride
SFP	State fully protected
SHPO	State Historic Preservation Officer
SIC	Southeastern Information Center
SIP	State Implementation Plan
SLF	Sacred Lands File
SLRU	Sensitivity Level Rating Units
SO_2	sulfur dioxide
SO_4	sulfate
SOPs	standard operating procedures
SO_X	sulfur oxides
SPCC	Spill Prevention Control and Countermeasures
SPRR	Southern Pacific Railroad
sq mi	square miles
SQRUs	Scenic Quality Rating Units
SR-111	State Route 111
SR-98	State Route 98
SRA	Safety Risk Assessment
SRA	State Responsibility Area
SRP	Scientific Review Panel
SS	soil stabilization
SSAB	Salton Sea Air Basin
SSAB	Salton Sea Air Basin

ST	State listed as threatened
STG	steam turbine-generator
SVP	Society of Vertebrate Paleontology
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SWWTP	Seeley Wastewater Treatment Plant
TAC	Toxic Air Contaminants
T-BACT	Best Available Control Technology for Toxics
TC	tracking control
TDS	Total Dissolved Solids
TGA	Taylor Grazing Act
TMDLs	Total Maximum Daily Loads
TNW	traditional navigable water
tpy	tons per year
UBC	Uniform Building Code
UDI	undocumented immigrants
µg/L	micrograms per Liter
$\mu g/m^3$	micrograms per cubic meter
URS	URS Corporation
US	United States
USACE	United States Army Corps of Engineers
USBR	United States Bureau of Reclamation
USC	United States Code
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USLE	Universal Soil Loss Equation
UXO	unexploded ordnance
UV	ultraviolet
V	volts
VAC	volts alternating current
VAR	volt-ampere reactive
VdB	velocity decibel
VDE	Visible Dust Emission
VHA	Lavic Lake volcanic hazard area
VMT	vehicle miles traveled
VOCs	volatile organic compounds

VRI	Visual Resource Inventory
VRM	Visual Resource Management
W	watts
WAs	Wilderness Areas
WAPA	Western Area Power Administration
WB	westbound
WDR	Waste Discharge Requirement
WE	wind erosion
WEAP	Worker Environmental Awareness Program
WEC	World Energy Council
WECC	Western Electricity Coordinating Council
WECO	Western Colorado Desert Routes of Travel Designations
WEPS	Wind Erosion Prediction System
WHMA	Wildlife Habitat Management Area
WILD	Wildlife Habitat
WIU	Wilderness Inventory Unit
WL	Watch List
WRCC	Western Regional Climate Center
WSA	Wilderness Study Area
WSAC	Wet Surface Air Cooler
WSS	Web Soil Survey
WTE	Wave & Tidal Energy
ybp	years before present
YDMP	Yuha Desert Management Plan
yr	year
ZOI	zone of influence

GLOSSARY OF TERMS

A

Adjacent: Defined by ASTM E1527-00 as any real property the border of which is contiguous or partially contiguous with that of the Site or would be contiguous or partially contiguous with that of the Site but for a street, road, or other public thoroughfare separating them.

Air Basin: A regional area defined for state air quality management purposes based on considerations that include topographic features that influence meteorology and pollutant transport patterns, and political jurisdiction boundaries that influence the design and implementation of air quality management programs.

Air Quality Control Region: A regional area defined for federal air quality management purposes based on considerations that include topographic features that influence meteorology and pollutant transport patterns, and political jurisdiction boundaries that influence the design and implementation of air quality management programs.

Alluvium: a fine-grained fertile soil consisting of mud, silt, and sand deposited by flowing water on flood plains, in river beds, and in estuaries.

Alluvial Fan: Fan shaped material of water deposited sediments.

Ambient Air Quality Standards: A combination of air pollutant concentrations, exposure durations, and exposure frequencies that are established as thresholds above which adverse impacts to public health and welfare may be expected. Ambient air quality standards are set on a national level by the U.S. Environmental Protection Agency. Ambient air quality standards are set on a state level by public health or environmental protection agencies as authorized by state law.

Ambient Air: Outdoor air in locations accessible to the general public.

Archaeological district: A significant concentration, linkage, or continuity of sites, buildings, or features important in history or prehistory. There can be discontiguous districts composed of resources that are not in close proximity to one another

Area of Critical Environmental Concern (ACEC): A designated area on public lands where special management attention is required: (1) to protect and prevent irreparable damage to fish and wildlife; (2) to protect important historic, cultural, or scenic values, or other natural systems or processes; or (3) to protect life and safety from natural hazards.

Attainment Area: An area that has air quality as good as or better than a national or state ambient air quality standard. A single geographic area may be an attainment area for one pollutant and a non-attainment area for others.

B

Basic Elements: The four design elements (form, line, color, and texture), which determine how the character of a landscape is perceived.

Bioremediation: The use of biological agents, such as bacteria or plants, to remove or neutralize contaminants, as in polluted soil or water.

C

Calcareous Substrates: Substances, often cemented and of a chalky appearance, containing calcium carbonate.

Cancer: A class of diseases characterized by uncontrolled growth of somatic cells. Cancers are typically caused by one of three mechanisms: chemically induced mutations or other changes to cellular DNA; radiation induced damage to cellular chromosomes; or viral infections that introduce new DNA into cells.

Carbon Monoxide (CO): A colorless, odorless gas that is toxic because it reduces the oxygen-carrying capacity of the blood.

Characteristic: A distinguishing trait, feature, or quality.

Characteristic Landscape: The established landscape within an area being viewed. This does not necessarily mean a naturalistic character. It could refer to an agricultural setting, an urban landscape, a primarily natural environment, or a combination of these types.

Climate: A statistical description of daily, seasonal, or annual weather conditions based on recent or long-term weather data. Climate descriptions typically emphasize average, maximum, and minimum conditions for temperature, precipitation, humidity, wind, cloud cover, and sunlight intensity patterns; statistics on the frequency and intensity of tornado, hurricane, or other severe storm events may also be included.

Community Noise Equivalent Level (CNEL): A 24-hour average noise level rating with a 5 dB penalty factor applied to evening noise levels and a 10 dB penalty factor applied to nighttime noise levels. The CNEL value is very similar to the Day-Night Average Sound Level (Ldn) value, but includes an additional weighting factor for noise during evening hours.

Contrast: Opposition or unlikeness of different forms, lines, colors, or textures in a landscape.

Contrast Rating: A method of analyzing the potential visual impacts of proposed management activities.

Cretaceous: In geologic history the third and final period of the Mesozoic era, from 144 million to 65 million years ago, during which extensive marine chalk beds formed.

Criteria Pollutant: An air pollutant for which there is a national ambient air quality standard (carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, inhalable particulate matter, fine particulate matter, or airborne lead particles).

Critical Habitat: Habitat designated by the US Fish and Wildlife Service under Section 4 of the Endangered Species Act and under the following criteria: 1) specific areas within the geographical area occupied by the species at the time it is listed, on which are found those physical or biological features essential to the conservation of the species and that may require special management of protection; or 2) specific areas outside the geographical area by the species at the time it is listed but that are considered essential to the conservation of the species.

Cultural Modification: Any man-caused change in the land form, water form, vegetation, or the addition of a structure which creates a visual contrast in the basic elements (form, line, color, texture) of the naturalistic character of a landscape.

Cultural Resource: A location of human activity, occupation, or use identifiable through field inventory, historical documentation, or oral evidence. Cultural resources include archaeological and historical sites, structures, buildings, objects, artifacts, works of art, architecture, and natural features that were important in past human events. They may consist of physical remains or areas where significant human events occurred, even though evidence of the events no longer remains. And they may include definite locations of traditional, cultural, or religious importance to specified social or cultural groups.

Cultural Resource Data: Cultural resource information embodied in material remains such as artifacts, features, organic materials, and other remnants of past activities. An important aspect of data is context, a concept that refers to the relationships among these types of materials and the situations in which they are found.

Cultural Resource Data Recovery: The professional application of scientific techniques of controlled observation, collection, excavation, and/or removal of physical remains, including analysis, interpretation, explanation, and preservation of recovered remains and associated records in an appropriate curatorial facility used as a means of protection. Data recovery may sometimes employ professional collection of such data as oral histories, genealogies, folklore, and related information to portray the social significance of the affected resources. Such data recovery is sometimes used as a measure to mitigate the adverse impacts of a ground-disturbing project or activity.

Cultural Resource Integrity: The condition of a cultural property, its capacity to yield scientific data, and its ability to convey its historical significance. Integrity may reflect the authenticity of a property's historic identity, evidenced by the survival or physical characteristics that existed during its historic or prehistoric period, or its expression of the aesthetic or historic sense of a particular period of time.

Cultural Resource Inventory (Survey): A descriptive listing and documentation, including photographs and maps of cultural resources. Included in an inventory are the processes of locating, identifying, and recording sites, structures, buildings, objects, and districts through library and archival research, information from persons knowledgeable about cultural resources, and on-the-ground surveys of varying intensity.

Class I: A professionally prepared study that compiles, analyzes, and synthesizes all available data on an area's cultural resources. Information sources for this study include published and unpublished documents, BLM inventory records, institutional site files, and state and National Register files. Class I inventories may have prehistoric, historic, and ethnological and sociological elements. These inventories are periodically updated to include new data from other studies and Class II and III inventories.

Class II: A professionally conducted, statistically based sample survey designed to describe the probable density, diversity, and distribution of cultural properties in a large area. This survey is achieved by projecting the results of an intensive survey carried out over limited parts of the target area. Within individual sample units, survey aims, methods, and intensities are the same as those applied in Class III inventories. To improve statistical reliability, Class II inventories may be conducted in several phases with different sample designs.

Class III: A professionally conducted intensive survey of an entire target area aimed at locating and recording all visible cultural properties. In a Class III survey, trained observers commonly conduct systematic inspections by walking a series of close interval parallel transects until they have thoroughly examined an area.

Cultural Resource Values: The irreplaceable qualities that are embodied in cultural resources, such as scientific information about prehistory and history, cultural significance to Native Americans and other groups, and the potential to enhance public education and enjoyment of the Nation's rich cultural heritage.

Cultural Site: A physical location of past human activities or events, more commonly referred to as an archaeological site or a historic property. Such sites vary greatly in size and range from the location of a single cultural resource object to a cluster of cultural resource structures with associated objects and features.

D

Day/Night Average Sound Level (Ldn): A 24-hour average noise level rating with a 10 dB penalty factor applied to nighttime noise levels. The Ldn value is very similar to the CNEL value, but does not include any weighting factor for noise during evening hours.

Decibel (dB): A generic term for measurement units based on the logarithm of the ratio between a measured value and a reference value. Decibel scales are most commonly associated with acoustics (using air pressure fluctuation data); but decibel scales sometimes are used for ground-borne vibrations or various electronic signal measurements.

Desert Pavement: A surface covering developed over time, of closely packed rock fragments of pebble or cobble size found on desert soils.

Desert Wildlife Management Area (DWMA): areas established in the NECO Plan to address the recovery of the desert tortoise. They are intended to be areas where viable desert tortoise populations can be maintained (Category I habitat).

Distance Zones: A subdivision of the landscape as viewed from an observer position. The subdivision (zones) includes foreground-middleground, background, and seldom seen.

Drought condition: A hydrologic condition during a defined period when rainfall and runoff are much less than average.

E

Enhancement: A management action designed to improve visual quality.
Equivalent Average Sound Pressure Level (Leq): The decibel level of a constant noise source that would have the same total acoustical energy over the same time interval as the actual time-varying noise condition being measured or estimated. Leq values must be associated with an explicit or implicit averaging time in order to have practical meaning.

Ethnohistoric Resources: Areas used by Native Americans following exploration and settlement by non-Native Americans. Sites or artifacts of particular significance to modern Native Americans are often kept secret by those groups to protect the sites from disturbance, looting, overuse, or other defamations.

Excavation: The scientific examination of an archaeological site through layer-by-layer removal and study of the contents within prescribed surface units, e.g. square meters.

F

Fluvial: Of, relating to, or occurring in a river.

Form: The mass or shape of an object or objects which appear unified, such as a vegetative opening in a forest, a cliff formation, or a water tank.

G

Geomorphic Province: Naturally defined geologic regions that display a distinct landscape or landform.

Greenhouse Gas: A gaseous compound that absorbs infrared radiation and re-radiates a portion of hat back toward the earth's surface, thus trapping heat and warming the earth's atmosphere.

Groundwater Overdraft: The condition of a groundwater basin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of years during which water supply conditions approximate average conditions (CDWR, 1998).

H

Habitat: A specific set of physical conditions that surround a single species, a group of species, or a large community. In wildlife management, the major components of habitat are considered to be food, water, cover, and living space.

Hazardous Air Pollutant (HAP): Air pollutants which have been specifically designated by relevant federal or state authorities as being hazardous to human health. Most HAP compounds are designated due to concerns related to: carcinogenic, mutagenic, or teratogenic properties; severe acute toxic effects; or ionizing radiation released during radioactive decay processes.

Hertz (Hz): A standard unit for describing acoustical frequencies measured as the number of air pressure fluctuation cycles per second. For most people, the audible range of acoustical frequencies is from 20 Hz to 20,000 Hz.

Historical Site: A location that was used or occupied after the arrival of Europeans in North America (ca. A.D. 1492). Such sites may consist of physical remains at archaeological sites or areas where significant human events occurred, even though evidence of the events no longer remains. They may have been used by people of either European or Native American descent.

Holocene: Of, denoting, or formed in the second and most recent epoch of the Quaternary period, which began 10,000 years ago at the end of the Pleistocene.

Hydrocarbons: Any organic compound containing primarily carbon and hydrogen, such as the alkanes, alkenes, alkynes, terpenes, and arenes.

I

Igneous: Rock, such as granite and basalt that has solidified from a molten or partially molten state.

Indian Tribe: Any American Indian group in the United States that the Secretary of the Interior recognizes as possessing tribal status (listed periodically in the Federal Register).

Indigenous: Being of native origin (such as indigenous peoples or indigenous cultural features).

Interdisciplinary Team: A group of individuals with different training, representing the physical sciences, social sciences, and environmental design arts, assembled to solve a problem or perform a task. The members of the team proceed to a solution with frequent interaction so that each discipline may provide insights to any stage of the problem and disciplines may combine to provide new solutions.

Invasive Species: An exotic species whose introduction does or is likely to cause economic or environmental harm or harm to human health (Executive Order 13122, 2/3/99).

Isolate: Non-linear, isolated archaeological features without associated artifacts.

K

Key Observation Point (KOP): One or a series of points on a travel route or at a use area or a potential use area, where the view of a management activity would be most revealing.

L

Landscape Character: The arrangement of a particular landscape as formed by the variety and intensity of the landscape features and the four basic elements of form, line, color, and texture. These factors give the area a distinctive quality which distinguishes it from its immediate surroundings.

Landscape Features: The land and water form, vegetation, and structures which compose the characteristic landscape.

Leasable Minerals: Minerals whose extraction from federally managed land requires a lease and the payment of royalties. Leasable minerals include coal, oil and gas, oil shale and tar sands potash, phosphate, sodium, and geothermal steam.

Line: The path, real or imagined, that the eye follows when perceiving abrupt differences in form, color, or texture. Within landscapes, lines may be found as ridges, skylines, structures, changes in vegetative types, or individual trees and branches.

Locatable Minerals: Minerals subject to exploration, development, and disposal by staking mining claims as authorized by the Mining Law of 1872, as amended. This includes deposits of gold, silver, and other uncommon minerals not subject to lease or sale.

M

Maintenance Area: An area that currently meets federal ambient air quality standards but which was previously designated as a nonattainment area. Federal agency actions occurring in a maintenance area are still subject to Clean Air Act conformity review requirements.

Management Activity: A surface disturbing activity undertaken on the landscape for the purpose of harvesting, traversing, transporting, protecting, changing, replenishing, or otherwise using resources.

Memorandum of Understanding (MOU): A written but noncontractual agreement between two or more agencies or other parties to take a certain course of action.

Mineral Material Disposal: The sale of sand, gravel, decorative rock, or other materials defined in 43 CFR 3600.

Mining Claim: A mining claim is a selected parcel of Federal Land, valuable for a specific mineral deposit or deposits, for which a right of possession has been asserted under the General Mining Law. This right is restricted to the development and extraction of a mineral deposit. The rights granted by a mining claim protect against a challenge by the United States and other claimants only after the discovery of a valuable mineral deposit. The two types of mining claims are lode and placer. In addition, mill sites and tunnel sites may be located to provide support facilities for lode and placer mining.

Mitigation: Mitigation includes: (a) Avoiding the impacts altogether by not taking an action or parts of an action, (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment, (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action, (e) Compensating for the impact by replacing or providing substitute resources or environments (40 CFR 1508.20).

N

National Pollutant Discharge Elimination System (NPDES): The NPDES permit program has been delegated in California to the State Water Resources Control Board. These sections of the CWA require that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the United States must obtain a State certification that the discharge complies with other provisions of the Clean Water Act.

National Register District: A group of significant archaeological, historical, or architectural sites, within a defined geographic area, that is listed on the National Register of Historic Places. See National Register of Historic Places.

National Register of Historic Places: The official list, established by the National Historic Preservation Act, of the Nation's cultural resources worthy of preservation. The National Register lists archeological, historic, and architectural properties (i.e. districts, sites, buildings, structures, and objects) nominated for their local, state, or national significance by state and federal agencies and approved by the National Register Staff. The National Park Service maintains the National Register. Also see National Historic Preservation Act.

National Scenic Trail: One of the three categories of national trails defined in the National Trails System Act of 1968 that can only be established by act of Congress and are administered by federal agencies, although part or all of their land base may be owned and managed by others. National Scenic Trails are existing regional and local trails recognized by either the Secretary of Agriculture or the Secretary of the Interior upon application.

Native American: Indigenous peoples of the western hemisphere.

Nitric Oxide (NO): A colorless toxic gas formed primarily by combustion processes that oxidize atmospheric nitrogen gas or nitrogen compounds found in the fuel. A precursor of ozone, nitrogen dioxide, numerous types of photochemically generated nitrate particles (including PAN), and atmospheric nitrous and nitric acids. Most nitric oxide formed by combustion processes is converted into nitrogen dioxide by subsequent oxidation in the atmosphere over a period that may range from several hours to a few days.

Nitrogen Dioxide (NO2): A toxic reddish gas formed by oxidation of nitric oxide. Nitrogen dioxide is a strong respiratory and eye irritant. Most nitric oxide formed by combustion processes is converted into nitrogen dioxide by subsequent oxidation in the atmosphere. Nitrogen dioxide is a criteria pollutant in its own right, and is a precursor of ozone, numerous types of photochemically generated nitrate particles (including PAN), and atmospheric nitrous and nitric acids.

Nitrogen Oxides (NOx): A group term meaning the combination of nitric oxide and nitrogen dioxide; other trace oxides of nitrogen may also be included in instrument-based NOx measurements. A precursor of ozone, photochemically generated nitrate particles (including PAN), and atmospheric nitrous and nitric acids.

Non-native Species: See Invasive Species and Noxious Weed.

Noxious Weed: According to the Federal Noxious Weed Act (PL 93-629), a weed that causes disease or has other adverse effects on man or his environment and therefore is detrimental to the agricultural and commerce of the United States and to the public health.

Nonattainment Area: An area that does not meet a federal or state ambient air quality standard. Federal agency actions occurring in a federal nonattainment area are subject to Clean Air Act conformity review requirements.

O

Off-Highway Vehicle (OHV): Any vehicle capable of or designed for travel on or immediately over land, water, or other natural terrain, deriving motive power from any source other than muscle. OHVs exclude: 1) any non-amphibious registered motorboat; 2), any fire, emergency, or law enforcement vehicle while being used for official or emergency purposes; 3) any vehicle whose use is expressly authorized by a permit, lease, license, agreement, or contract issued by an authorized officer or otherwise approved; 4) vehicles in official use; and 5) any combat or combat support vehicle when used in times of national defense emergencies.

Organic Compounds: Compounds of carbon containing hydrogen and possibly other elements (such as oxygen, sulfur, or nitrogen). Major subgroups of organic compounds include hydrocarbons, alcohols, aldehydes, carboxylic acids, esters, ethers, and ketones. Organic compounds do not include crystalline or amorphous forms of elemental carbon (graphite, diamond, carbon black, etc.), the simple oxides of carbon (carbon monoxide and carbon dioxide), metallic carbides, or metallic carbonates.

Overdraft condition: A condition in which the total volume of water being extracted from the groundwater basin would be greater than the total recharge provided to the basin.

Ozone (O3): A compound consisting of three oxygen atoms. Ozone is a major constituent of photochemical smog that is formed primarily through chemical reactions in the atmosphere involving reactive organic compounds, nitrogen oxides, and ultraviolet light. Ozone is a toxic chemical that damages various types of plant and animal tissues and which causes chemical oxidation damage to various materials. Ozone is a respiratory irritant, and appears to increase susceptibility to respiratory infections. A natural layer of ozone in the upper atmosphere absorbs high energy ultraviolet radiation, reducing the intensity and spectrum of ultraviolet light that reaches the earth's surface.

P

Paleontological Resources (Fossils): The physical remains of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources are for understanding past environments, environmental change, and the evolution of life.

Paleontology: A science dealing with the life forms of past geological periods as known from fossil remains.

Paleozoic Era: An era of geologic time (600 million to 280 million years ago) between the Late Precambrian and the Mesozoic eras and comprising the Cambrian, Ordovician, Silurian, Devonian, Missippian, Pennsylvanian, and Permian periods.

Particulate Matter: Solid or liquid material having size, shape, and density characteristics that allow the material to remain suspended in the atmosphere for more than a few minutes. Particulate matter can be characterized by chemical characteristics, physical form, or aerodynamic properties. Categories based on aerodynamic properties are commonly described as being size categories, although physical size is not used to define the categories. Many components of suspended particulate matter are respiratory irritants. Some components (such as crystalline or fibrous minerals) are primarily physical irritants. Other components are chemical irritants (such as sulfates, nitrates, and various organic chemicals). Suspended particulate matter also can contain compounds (such as heavy metals and various organic compounds) that are systemic toxins or necrotic agents. Suspended particulate matter or compounds adsorbed on the surface of particles can also be carcinogenic or mutagenic chemicals.

Peak Particle Velocity: A measure of ground-borne vibrations. Physical movement distances are typically measured in thousandths of an inch, and occur over a tiny fraction of a second. But the normal convention for presenting that data is to convert it into units of inches per second.

Perennial Yield: The maximum quantity of water that can be annually withdrawn from a groundwater basin over a long period of time [during which water supply conditions approximate average conditions] without developing an overdraft condition.- CDWR, 1998).

Petroglyph: Pictures, symbols, or other art work pecked, carved, or incised on natural rock surfaces.

pH (parts hydrogen): The logarithm of the reciprocal of hydrogen-ion concentration in gram atoms per liter.

Physiographic Province: An extensive portion of the landscape normally encompassing many hundreds of square miles, which portrays similar qualities of soil, rock, slope, and vegetation of the same geomorphic origin (Fenneman 1946; Sahrhaftig 1975).

Pleistocene (Ice Age): An epoch in the Quarternary period of geologic history lasting from 1.8 million to 10,000 years ago. The Pleistocene was an epoch of multiple glaciation, during which continental glaciers covered nearly one fifth of the earth's land.

Pliocene: The Pliocene Epoch is the period in the geologic timescale that extends from 5.332 million to 2.588 million years before present.

PM_{10} (inhalable particulate matter): A fractional sampling of suspended particulate matter that approximates the extent to which suspended particles with aerodynamic equivalent diameters smaller than 50 microns penetrate to the lower respiratory tract (tracheo-bronchial airways and alveoli in the lungs). In a regulatory context, PM_{10} is any suspended particulate matter collected by a certified sampling device having a 50 percent collection efficiency for particles with aerodynamic equivalent diameters of 9.5-10.5 microns and an maximum aerodynamic diameter collection limit less than 50 microns. Collection efficiencies are greater than 50 percent for particles with aerodynamic diameters smaller than 10 microns and less than 50 percent for particles with aerodynamic diameters larger than 10 microns.

$PM_{2.5}$ (fine particulate matter): A fractional sampling of suspended particulate matter that approximates the extent to which suspended particles with aerodynamic equivalent diameters smaller than 6 microns penetrate into the alveoli in the lungs. In a regulatory context, $PM_{2.5}$ is any

suspended particulate matter collected by a certified sampling device having a 50 percent collection efficiency for particles with aerodynamic equivalent diameters of 2.0-2.5 microns and an maximum aerodynamic diameter collection limit less than 6 microns. Collection efficiencies are greater than 50 percent for particles with aerodynamic diameters smaller than 2.5 microns and less than 50 percent for particles with aerodynamic diameters larger than 2.5 microns.

Precursor: A compound or category of pollutant that undergoes chemical reactions in the atmosphere to produce or catalyze the production of another type of air pollutant.

Prehistoric: Refers to the period wherein American Indian cultural activities took place before written records and not yet influenced by contact with nonnative culture(s).

Programmatic Agreement (PA): A document that details the terms of a formal, legally binding agreement between one party and other state and/or federal agencies. A PA establishes a process for consultation, review, and compliance with one or more federal laws, most often with those federal laws concerning historic preservation.

Protocol Agreement (Protocol): A modified version of the NPA, adapted to the unique requirements of managing cultural resources on public lands in California, and is used as the primary management guidance for BLM offices in the state.

Q

Quaternary Age: The most recent of the three periods of the Cenozoic Era in the geologic time scale of the ICS. It follows the Tertiary Period, spanning 2.588 ± 0.005 million years ago to the present. The Quaternary includes two geologic epochs: the Pleistocene and the Holocene Epochs.

R

Rehabilitation: A management alternative and/or practice which restores landscapes to a desired scenic quality.

Restoration (Cultural Resource): The process of accurately reestablishing the form and details of a property or portion of a property together with its setting, as it appeared in a particular period of time. Restoration may involve removing later work that is not in itself significant and replacing missing original work. Also see Stabilization (Cultural Resource).

Riparian: Situated on or pertaining to the bank of a river, stream, or other body of water. Normally describes plants of all types that grow rooted in the water table or sub-irrigation zone of streams, ponds, and springs.

Road: A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use.

Route: “Routes” represents a group or set of roads, trails, and primitive roads that represents less than 100% of the BLM transportation system. Generically, components of the transportation system are described as routes.

S

Saleable Minerals: Common variety minerals on the public lands, such as sand and gravel, which are used mainly for construction and are disposed by sales or special permits to local governments. See also Mineral Materials.

Scale: The proportionate size relationship between an object and the surroundings in which the object is placed.

Scenery: The aggregate of features that give character to a landscape.

Scenic Area: An area whose landscape character exhibits a high degree of variety and harmony among the basic elements which results in a pleasant landscape to view.

Scenic Quality: The relative worth of a landscape from a visual perception point of view.

Scenic Quality Evaluation Key Factors: The seven factors (land form, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications) used to evaluate the scenic quality of a landscape.

Scenic Quality Ratings: The relative scenic quality (A, B, or C) assigned a landscape by applying the scenic quality evaluation key factors; scenic quality A being the highest rating, B a moderate rating, and C the lowest rating.

Scenic Values: See Scenic Quality and Scenic Quality Ratings.

Secretary of the Interior: The U.S. Department of the Interior is in charge of the nation's internal affairs. The Secretary serves on the President's cabinet and appoints citizens to the National Park Foundation board.

Sedimentary Rocks: Rocks, such as sandstone, limestone, and shale, that are formed from sediments or transported fragments.

Sensitivity Levels: Measures (e.g., high, medium, and low) of public concern for scenic quality.

Shaft: See Mine Shaft.

Special Status Species: Federal- or state-listed species, candidate or proposed species for listing, or species otherwise considered sensitive or threatened by state and federal agencies.

State Historic Preservation Office (SHPO): The official within and authorized by each state at the request of the Secretary of the Interior to act as liaison for the National Historic Preservation Act. Also see National Historic Preservation Act.

State Implementation Plan (SIP): Legally enforceable plans adopted by states and submitted to EPA for approval, which identify the actions and programs to be undertaken by the State and its subdivisions to achieve and maintain national ambient air quality standards in a time frame mandated by the Clean Air Act.

State Water Resources Control Board (SWRCB): Created in 1967, joint authority of water allocation and water quality protection enables the State Water Board to provide comprehensive protection for California's waters. The mission of the nine Regional Boards is to develop and enforce water quality objectives and implementation plans that will best protect the State's waters, recognizing local differences in climate, topography, geology and hydrology.

Subsurface: Of or pertaining to rock or mineral deposits which generally are found below the ground surface.

Sulfur Dioxide (SO2): A pungent, colorless, and toxic oxide of sulfur formed primarily by the combustion of fossil fuels. It is a respiratory irritant, especially for asthmatics. A criteria pollutant in its own right, and a precursor of sulfate particles and atmospheric sulfuric acid.

T

Taphonomy: The study of the processes by which animal bones and shells and plant and other fossil remains are transformed after deposition.

Tertiary: The Tertiary Period marks the beginning of the Cenozoic Era. It began 65 million years ago and lasted more than 63 million years, until 1.8 million years ago. The Tertiary is made up of 5 epochs: the Paleocene Epoch, the Eocene Epoch, the Oligocene Epoch, the Miocene Epoch, and the Pliocene Epoch.

Texture: The visual manifestations of the interplay of light and shadow created by the variations in the surface of an object or landscape.

Toxic: Poisonous. Exerting an adverse physiological effect on the normal functioning of an organism's tissues or organs through chemical or biochemical mechanisms following physical contact or absorption.

Traditional Cultural Properties: Areas associated with the cultural practices or beliefs of a living community. These sites are rooted in the community’s history and are important in maintaining cultural identity.

Trail: A linear route managed for human-powered, stock, or off-highway vehicle forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles.

V

Vandalism (Cultural Resource): Malicious damage or the unauthorized collecting, excavating, or defacing of cultural resources. Section 6 of the Archaeological Resources Protection Act states that "no person may excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands…unless such activity is pursuant to a permit issued under section 4 of this Act."

Variables: Factors influencing visual perception including distance, angle of observation, time, size or scale, season of the year, light, and atmospheric conditions.

Variety: The state or quality of being varied and having the absence of monotony or sameness.

Vehicle Miles Traveled (VMT): The cumulative amount of vehicle travel within a specified or implied geographical area over a given period of time.

Viewshed: The landscape that can be directly seen under favorable atmospheric conditions, from a viewpoint or along a transportation corridor. Protection, rehabilitation, or enhancement is desirable and possible.

Visual Contrast: See Contrast.

Visual Quality: See Scenic Quality.

Visual Resources: The visible physical features on a landscape (e.g., land, water, vegetation, animals, structures, and other features).

Visual Resource Management Classes: Categories assigned to public lands based on scenic quality, sensitivity level, and distance zones. There are four classes. Each class has an objective which prescribes the amount of change allowed in the characteristic landscape.

Visual Resource Management (VRM): The inventory and planning actions taken to identify visual values and to establish objectives for managing those values; and the management actions taken to achieve the visual management objectives.

Visual Values: See Scenic Quality.

W

Wetlands: Permanently wet or intermittently water-covered areas, such as swamps, marshes, bogs, potholes, swales, and glades.

Wilderness Area: An area formally designated by Congress as part of the National Wilderness Preservation System as defined in the Wilderness Act of 1964 (78 Stat.891), Section 2(c).

Wilderness Study Area: A roadless area or island that has been inventoried and found to have wilderness characteristics as described in section 603 of FLPMA and section 2(c) of the Wilderness Act of 1964 (78 Stat. 891). Source for both of these is BLM's IMP and Guidelines for Lands Under Wilderness Review (December 1979).

REFERENCES

Organization of the References

A number of document available through the California Energy Commission's permitting process were used as primary references in preparing this PA/FEIS. These include the Staff Assessment/Draft Environmental Impact Statement, the Revised Staff Assessment, and the Revised Staff Assessment Supplement. The SA/DEIS is incorporated by reference in this FEIS. Other references used in the preparation of this FEIS for the GSEP are organized in this section as follows:

References from the CEC Permitting Process

The references listed here are provide the complete listing of references that were used in the PA/FEIS that were obtained from the Genesis Application for Certification or by the CEC permitting process.

Additional References

These are additional references that were used by the PA/FEIS authors as primary sources of information for the analyses provided in the PA/FEIS.

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